

REPORT

ON THE

FAMINE IN THE CENTRAL PROVINCES

IN

1899-1900.

VOLUME III.

APPENDIX IV (P. W. D. SECTION)

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**Famine Report, Public Works Department Section, by the Hon'ble
L. M. ST. CLAIR, Assoc. M. Inst. C. E., Officiating Superintending
Engineer, Central Provinces, Public Works Department.**

In the District summaries appended to this Report has been given a general account of the relief operations under the Public Works Department, arranged by districts, from their commencement to close. These summaries are accompanied by statistical tables, diagrams and maps illustrating the main features of the operations, the extent and cost of relief afforded, and the value of work done by relief labour. It now remains to record briefly the principal events connected with the works undertaken by the Public Works Department during the famine, the measures and methods of working adopted, and the general results as regards their efficiency from the point of view of discipline and economy.

2. Immediately the possibility of famine presented itself in August 1899, steps were taken in the Public Works Department for the preparation of programmes of famine-relief charges to provide, as far as information could then be given by the Civil authorities, for any possible demands for relief labour for some considerable time. Works most appropriate for relief were selected by the Superintending Engineer in consultation with the Civil authorities, and the Executive Engineers were warned to hold themselves in readiness to organise them at short notice. It was, however, considered undesirable to collect large bodies of workers while the ground was wet and malarial fever and other diseases were prevalent; and Mr. Ibbetson decided that no Public Works would be opened before the 15th October 1899 (*vide* Famine Circular No. F-11, dated the 22nd August 1899). This interval was utilized in drawing up a General Order embodying detailed rules, forms, and instructions for the organisation and conduct of relief-works under the Public Works Department. The orders were based mainly on the results of practical experience in the Central Provinces during the famine of 1896-97, and on the recommendations of the Famine Commission of 1898, which were adopted with the few modifications indicated in Central Provinces letter No. 3827, dated the 4th September 1899, to the Government of India, Revenue and Agriculture Department. The General Order, which is printed as an Appendix* to this Report, was not issued in a complete form until the 20th September 1899; but the more essential instructions and forms were supplied in advance to the Executive Engineers to enable them to train their subordinates and all applicants for employment on relief-works in the methods about to be brought into force. Surveys of the most important works included in the famine programme issued on the 27th February 1899 were at once taken in hand; and estimates for works, special establishment, tools and plant, and other items were prepared in accordance with the instructions laid down in Superintending Engineer's Circular No. 290-7673—F,† dated the 20th September 1899.

3. At the start one month's notice was prescribed for the opening of relief-works under the Public Works Department, and all the charges or works for which notice was given in the middle of September 1899, were opened on the 15th October 1899. Subsequently, however, the time required before a work could be opened after notice was given was gradually shortened, till only a few days' warning was sufficient in certain districts. The longest time taken in opening a camp was 30 days; the shortest, one day; and the average 15 days. Tools and plant were only available to a very limited extent at the beginning, and it took some time before a sufficiency could be procured. Endeavours were everywhere made to keep the tools and other equipment, for two charges at least, ready in reserve in each district where expansion of work-relief was anticipated. Owing to the enormous demand as works were opened in rapid succession, and

to the denudation of the local, Bombay and Calcutta markets, this reserve could not be kept up during the period of expansion, and the works in several instances suffered for want of tools in Raipur, Bilaspur, and to a slight extent in Chanda.

4. Immediately on receipt of warning for the opening of a camp by a specified date the following preparatory arrangements were made in accordance with the instructions laid down in the General Order No. 287-7630-F, dated the 20th September 1899 (*vide* Appendix C):—

Preparatory measures on receipt of warning.

- (i) The requisite staff was engaged and sent out with a sufficiency of tools, tents and miscellaneous articles as detailed in Appendix II to the General Order; also a complete set of medicines, surgical appliances and sundries as given in Appendix XXIII to the General Order.
- (ii) Water-supply was conserved, wells were disinfected (*vide* Appendix IX) according to Professor Hankin's method, and careful arrangements were made for the distribution of water throughout the camp and on the works—*vide* paragraphs 100 to 104 of the General Order and Appendix II.
- (iii) The supply of grain and coin and a police guard was arranged for in consultation with the Deputy Commissioner—*vide* paragraphs 115 and 87 to 89 of the General Order.
- (iv) The camp was erected in accordance with the plan accompanying Appendix II to the General Order, the most essential parts being got ready first (hospital, kitchen, pias, &c.) and the remainder later on, if they could not be completed before the opening of the camp. Hutting materials, where required, were provided in advance for the workers to enable them to make their own huts—*vide* paragraphs 105 and 106 of the General Order.
- (v) All conservancy, hospital and general sanitary arrangements were made in strict accordance with paragraphs 107 to 113 of the General Order.
- (vi) At least five miles of road work was laid out in advance; and in the case of metal-breaking, rubble was collected at the road-side by contract in the earlier stages to provide sufficient work for all applicants. Subsequently relief labour was usefully employed on rubble collection also.

Brief review of the operations under the Public Works Department.

5. The following table exhibits the course of operations under the Public Works Department from their commencement to close:—

Month.	Number of charges.	Average daily attendance.	Maximum daily attendance.	Proportion of men, women and children.	PROPORTION OF WORKERS AND DEPENDANTS.			PERCENTAGE OF WORKERS AND DEPENDANTS OVER AFFECTED POPULATION.				
					Inter-mediate.	Task.	Gratuitous.	Average.				Maximum.
								Inter-mediate.	Task.	Gratuitous.	Total.	
October 1899	32	77,550	111,687	33 42 35 Men Women Children	90'77	2'10	7'13	1'23	0'03	0'10	1'36	1'95
November	75	242,995	375,696		82'03	6'97	11'00	2'60	0'22	0'35	3'17	4'91
December	108	567,628	707,542		84'19	3'98	11'83	5'71	0'27	0'80	6'78	8'45
January 1900	130	794,298	897,197		85'02	1'91	13'07	8'41	0'19	1'29	9'89	11'17
February	154	748,198	849,402		82'86	2'09	15'05	7'72	0'20	1'40	9'32	10'58
March	171	776,664	878,718		82'11	2'07	15'82	8'05	0'20	1'55	9'80	11'09
April	185	770,935	872,854		81'61	2'89	15'50	7'84	0'28	1'49	9'61	10'88
May	189	818,574	897,813		81'01	4'07	14'92	7'87	0'39	1'45	9'71	10'65
June	168	677,179	809,438		82'03	3'29	14'68	6'28	0'25	1'13	7'66	9'16
July	123	451,265	583,978		84'22	1'01	14'77	4'22	0'05	0'74	5'01	6'48
August	79	205,003	285,637		82'74	0'81	16'45	1'74	0'02	0'35	2'11	2'94
September	43	106,993	152,625		84'86	0'31	14'83	0'93	0'01	0'16	1'10	1'57
October	13	43,680	59,494		86'40	0'25	13'35	0'70	0'01	0'10	0'81	1'10
	214	534,521	897,813		82'83	2'76	14'41	5'07	0'17	0'88	6'12	8'89

6. Relief-works under the Public Works Department were thrown open on the 15th October 1899. Thirty-two camps were almost simultaneously opened during this month in 12* districts out of the 18 in the Province. Relief was extended into 3 more districts in November, *viz.*, Narsinghpur, Bilaspur and Jubbulpore, thus covering the whole distressed area needing work-relief on a large scale. Activity in the

*Nagpur.	Betul.
Wardha.	Nimar.
Chanda.	Chhindwara.
Bhandara.	Raipur.
Balaghat.	Seoni.
Hoshangabad.	Saugor.

Public Works Department was confined chiefly to 14 out of the 15 districts above named, the camps in the Narsinghpur District being closed on account of the paucity of numbers after a brief existence. Of the remaining 3 districts, the Public Works Department were never called upon to organise works in Damoh; and although in Sambalpur and Mandla works were subsequently organized (December 1899 and April 1900 respectively) the numbers on relief in these districts were comparatively insignificant. The attendance on the Public Works grew steadily month by month until a maximum of close upon 9 lakhs was attained in January 1900, altogether 130 camps being then in operation. The average attendance during the month was nearly 8 lakhs. Of these 87 per cent. were relieved in return for labour and 13 per cent. were gratuitously fed in the kitchens attached to the Public Works Department camps. Of the maximum of 9 lakhs recorded during January, Raipur alone accounted for upwards of $2\frac{1}{2}$ lakhs or one-fourth of the number; Bilaspur contributed $1\frac{1}{2}$ lakhs; Chanda and Bhandara nearly $\frac{3}{4}$ ths of a lakh each; and Chhindwara, Balaghat and Betul about $\frac{2}{3}$ ths of a lakh each. The effect of the curtailment of wages and other stringent measures enjoined in Famine Circular No. 41-F, dated the 22nd January 1900, among other causes operating in the same direction, is seen in the drop in the February numbers. With the premature establishment of severe hot-weather conditions, the numbers soon mounted up again until in May they more than regained the height attained in January. Considering the Provinces as a whole, the high-water mark of relief under the Public Works Department was reached during May, the number of camps open at the time being 189 and the average and maximum attendance being 8'19 and 8'98 lakhs respectively. The largest numbers were:—Raipur, 2'20 lakhs; Chanda, 1'10; Bilaspur, 1'08; Bhandara, 0'68; Wardha, 0'65; Betul, 0'61; and Balaghat and Chhindwara, 0'54 each. Prompt effect was given to the orders contained in Famine Circular No. F-49, dated the 7th May 1900, regarding the contraction of Public Works. A general exodus of the workers occurred with the setting in of the monsoon; special measures were taken to draft people off camps, other than those selected for retention throughout the rains; and the numbers declined rapidly month by month until their final disappearance in October 1900.

7. Some conception may be formed of the unprecedented scale on which the Public Works Department were called upon to provide relief in the recent famine, from the figures given in the subjoined table:—

Comparison of the famines
of 1896-97 and 1899-1900

Particulars.			Famine of 1896-97.	Famine of 1899-1900.	Remarks.
No. of charges opened	...	No. ...	178	214	
Average daily attendance	...	Thousands ...	441	535*	* Maximum nearly 9 lakhs.
Total day-units relieved	...	Millions ...	98	180	
<i>Total quantities of work done.</i>					
Earthwork of all classes	..	Lakhs of cft. ...	2,315	5,179	
Metal and moorum collection	...	"	649	1,428	
Metal and moorum consolidation	...	"	227	310	
<i>Expenditure on relief.</i>					
Direct relief	...	Lakhs of Rs. ...	80 36	130'34	
Incidental charges	...	"	22'52	62'26	
Total expenditure	...	"	102'88	192'60	

8. The difficulties in the way of proper organisation of works on so extensive a scale and the maintenance of effective discipline over the rapidly increasing numbers at the outset were manifold. The provincial stock of tools and plant, supplemented by the large balances of the previous famine, soon proved inadequate, and local markets were exhausted in the course of a very few weeks. Even the large firms of Bombay and Calcutta were unable to meet the increasing demand, and the trouble in South Africa occasioned considerable delay in establishing a continuous supply from home. The provision of engineering and other staff was another matter of difficulty. The training institutions of the Province were closed and the professors and their students, advanced and junior, were at once sent out to the field. All time-keepers, literate *maistries*, and other officials possessing the least technical knowledge, were made to undergo a rapid course of training under experienced subordinates. The Engineering Colleges of India were freely drawn upon, the services of every available candidate on their rolls being enlisted with the least possible delay. Officers and subordinates were also borrowed from other Provinces and Departments. Numerous temporary engineers and subordinates were appointed from among candidates holding no appointments and without proper training; these men, with few exceptions, proved utterly useless and had to be dispensed with after a short trial. The demand for men to supervise the works was so great and pressing that every man who was in the least likely to be of use was perforce engaged. It took considerable time before all requirements could be met in any adequate way. The following figures speak for themselves:—

Statement of special appointments made during the Famine.

Description.				Total No.
Temporary Engineers	...	...	...	30
Famine Works Superintendents	...	...	...	27
Temporary Upper Subordinates	...	...	...	79
Do. Lower do.	...	...	...	653
Officers-in-Charge	...	...	...	260
Clerks	...	...	...	1,171
Hospital Assistants	...	...	...	190
Gang, Kitchen and Tools Muharrirs	...	...	...	3,241
Total				5,651

9. One of the most important lessons taught by the previous famine was the supreme necessity of having always ready at hand a programme of large useful works that might be set in operation at a moment's notice when the time for action arrived. On the maintenance of such an effective programme as this mainly depended the disposition of famine labour to the best advantage and the success generally of the relief measures adopted in the Public Works Department. This most useful lesson was not forgotten. A comprehensive programme was drawn up for each district with the greatest care in 1898 in consultation with the Civil authorities and issued in a complete form as early as February 1899. The investigation of the projects entered in the famine programme had also been taken up early; and surveys and estimates were, in the first instance, got ready for the works left incomplete in the last famine. That ample preparations were made in the Public

Works Department for a famine even transcending in its magnitude the great famine of 1896 and 1897 will be borne out by the following statement:—

Statement showing total day-units actually relieved in each district in millions as compared with those provided in Famine Programmes and with the day-units relieved in 1896-97.

Serial Number.	Districts.	Actual total day-units relieved in 1896-97.	Total day-units original programme (Roads only) 1899.	Actual total day-units relieved 1899-1900.	REVISED FAMINE PROGRAMME, 1900.			
					Roads.	Tanks.	Railways.	Total.
		Millions.	Millions.	Millions.	Millions.	Millions.	Millions.	Millions.
1	Jubbulpore	8.5	11.3	3.6	22.6	1.0	2.9	26.5
2	Seoni	1.8	6.6	3.6	13.2	4.3	12.5	30.0
3	Mandla	3.8	8.7	0.3	17.4	.....	2.1	19.5
4	Saugor	5.8	9.5	3.6	18.7	2.8	0.5	22.0
5	Damoh	4.6	5.3	.....	5.3	.....	.....	5.3
6	Nagpur	2.5	9.2	4.9	18.6	1.3	.....	19.9
7	Wardha	0.5	6.9	11.6	13.8	1.3	.....	15.1
8	Chanda	.....	8.2	16.3	30.9	1.3	.....	32.2
9	Bhandara	6.3	8.0	16.3	21.2	0.4	1.3	22.9
10	Balaghat	8.8	11.2	13.3	31.1	0.1	5.0	36.2
11	Hoshangabad	10.5	6.3	7.6	21.4	0.2	2.2	23.8
12	Betul	3.2	9.7	13.6	25.6	1.9	.....	27.5
13	Nimar	0.2	4.9	7.0	16.2	0.8	6.5	23.5
14	Narsinghpur	7.1	4.3	0.2	4.3	.....	.....	4.3
15	Chhindwara	3.2	10.3	10.6	10.3	.....	.....	10.3
16	Raipur	13.2	19.7	45.3	50.3	28.1	0.7	79.1
17	Bilaspur	8.1	13.9	21.4	38.5	12.2	3.6	54.3
18	Sambalpur	0.2	5.5	0.8	11.9	..	.....	11.9
	Total	88.3	159.5	180.0	371.3	55.7	37.3	464.3

10. It will be seen from the above table, that the original Programme of relief-works, which was issued on the 27th February 1899, comprised road works only and provided for the relief of nearly 160 million day-units in all as compared with 88 millions actually relieved in the Famine of 1896-97. With the rapid advance of the famine, the necessity for providing work-relief for still larger numbers soon became apparent, and immediate steps were taken to revise the programme. Railways, water-supply reservoirs, village tanks and a few minor irrigation works were added, and a comprehensive list was made out for each district to meet all possible developments; the total number of day-units for the whole Province amounting to 464 millions.

The actual numbers relieved in all were 180 millions, or only 20 millions in excess of the original programme (27th February 1899), and 92 millions in excess of the actual numbers relieved in 1896-97. The original programme fell short in the following districts:—

Wardha,	Balaghat,	Betul,
Chanda,	Hoshangabad,	Raipur,
Bhandara,	Nimar,	Bilaspur.

It was in the two last-named districts, where the numbers grew beyond all anticipation, that difficulty was chiefly felt in keeping the work programme in advance of the demand for work-relief.

Some idea of the arduous nature of the task the Public Works Department was thus called upon to perform may be obtained from the fact that estimates had to be prepared for 200 roads aggregating a length of close upon 2,500 miles, 18 railway works, 15 irrigation works, and 300 village tanks and other miscellaneous works. Over 700 estimates, amounting altogether to 200 lakhs of rupees, had to be promptly prepared, checked and sanctioned; and not a few are still awaiting final disposal.

11. The preponderance of women and children on the works and the influx of large numbers of foreigners driven from their homes by extreme privation (especially in the Nerbudda Division) added very materially to the difficulties. Special measures had to be adopted for drafting the immigrants to camps where congestion was least and for the organisation of extensive carriers' gangs for the carriage of road material so as to afford useful employment for women, children and enfeebled foreigners. Above all, elaborate preparations were necessary to meet the apprehended failure of water-supply. The rainfall throughout the Province was a great deal below the normal average, which resulted in a more or less acute water-famine in every district. Even the more favoured districts which are watered by large rivers and numerous streams did not altogether escape the general misfortune. Nearly all wells and minor streams dried up shortly after the close of the monsoon, and even large perennial rivers like the Nerbudda, the Wainganga and the Mahanadi were reduced to their very lowest levels. There were, indeed, tracts of country where for miles around no signs of water were visible except in the few stagnant pools left behind in the hollow beds of streams which had themselves run dry. Great efforts were made to conserve all possible sources of water, to utilize both the visible and sub-soil flow in streams and to make free use of even the stagnant pools of dirty water by simple but effective means of filtration such as those described in the report on the Nimar District. This want of water greatly hampered the employment of labour to the best advantage, as camps had to be located, not with regard to the interests of the works but in the most favourable situation as regards the supply of water.

12. The cumulative force of the adverse circumstances alluded to in the foregoing paragraphs made the position in which the Public Works Department found themselves at the outset of the famine, one of grave anxiety. Profiting, however, by the experience of the previous famine, the Department was fully prepared to meet all calls upon its resources in most districts, and to adjust carefully all relief measures to the pressing needs of the time. Every conceivable precaution had been taken to prevent the relief-works from becoming wasteful or chaotic; and were it not for the exceptional character of the situation in the Chhattisgarh Division during the critical month of January, which the Public Works Department was not in a position to foresee and provide for, the success of the departmental measures would have been complete. The extraordinary circumstances which led to the destruction of discipline and made the Public Works in the Raipur and Bilaspur districts unduly attractive for a time have already been narrated in the District summaries and need not be recapitulated here. The situation was promptly saved by a temporary suspension of free admission on the Public Works and a simultaneous expansion of village works under the Civil Department. It took nearly six weeks to bring the organisation into anything like thorough order and to restore the reality of the labour-test. The camps were then, with a few exceptions, where rushes were expected, thrown open again; and no further difficulty arose in maintaining strict discipline and keeping pace with all future developments.

13. The immediate direction of the large relief-works was from the outset entrusted to the Public Works Department. The responsibilities of the Public Works Department officers and their position in relation to the Civil officers were broadly indicated in Famine Circular No. F-26, dated the 6th October 1899. The Public Works Department management was subject to the power of control by the Commissioner and Deputy Commissioner in all points affecting the efficiency of relief, but not in matters of a purely professional nature. Theoretically, therefore, the real independence of the Public Works Department lay only in the setting out of work, accounting for expenditure and supply of tools and other necessary materials. The Deputy Commissioner was, however, directed to, and in actual practice did, avoid needless interference with the internal economy of a Public Works Department charge; and the system of dual control was in point of fact not productive of many difficulties. Occasional differences in matters of administrative detail were of course unavoidable; and in such cases the

orders of the Deputy Commissioner or Commissioner were carried out pending any necessary reference. But where all strove for the one common object of relieving the distressed, the relations of all officers concerned could not in the main be otherwise than harmonious.

14. No changes were made in the executive divisional charges of the Public

Superintendent of Works.
Public Works Department
Executive Divisions and Sub-
Divisions and relief charges.

*Jubbulpore. | Bhandara.†
Saugor.† | Hoshangabad.
Nagpur. | Narsinghpur.†
Eastern.

Works Department. There were in all *seven divisions, of which †three owed their existence to the famine of 1896-97. The conduct of affairs in the Eastern (Chhattisgarh) Division would probably have been more satisfactory, had it been possible to form the Bilaspur and Sambalpur districts into a separate division, with its head-quarters at Bilaspur ; but the unfortunate paucity of senior officers and other

circumstances prevented this desirable measure being carried out at the time when any good would have resulted from it. Of the seven divisions, five were held by Engineers on the Provincial cadre and two by Royal Engineers from the Military Works Department. In March 1900 a senior officer of the Public Works Department was appointed as Superintendent of Works for the southern part of the Province generally, consisting of the three Public Works Department Divisions—Nagpur, Bhandara and Eastern—and embracing the eight southern districts. There were altogether 21 permanent sub-divisions in the Province, of which 18 were engaged in famine relief. In all 30 temporary sub-divisions were created during the famine. Of the 48 sub-divisions engaged in famine work, 29 were in charge of permanent Engineers and Upper or Lower Subordinates, and 19 in charge of temporary employes. The average number of sub-divisions in a district was 3, the maximum being 7 (Raipur and Bilaspur). It was laid down in the General Order that the number of persons on a relief charge must not exceed 6,000, and that the Sub-Divisional Officer ought not to have to supervise and keep the accounts for more than four, or at most five charges, having regard to the distances apart and communications between the charges, the number limit being 30,000 persons. The average number of relief camps in charge of a Sub-Divisional Officer, however, was 6, the maximum being double the number ; but in these cases the Sub-Divisional Officer was assisted by Section Officers of the Upper Subordinate grade, each in charge of three or four camps. The average numbers on relief in most sub-divisions were within the limit prescribed by the General Order (approximately 15,000), but in Raipur, Bilaspur, Chanda, Wardha, Bhandara and Balaghat they frequently exceeded 30,000 and ran up as high as 60,000 or 70,000, *e. g.*, Mul Sub-Division (Chanda), 45,172 in week ending the 9th December, Drug Sub-Division (Raipur), 69,223 in week ending the 14th April, Bilaspur Sub-Division, 45,487 in week ending the 13th June. The attendance per charge was, on an average, under 4,000 ; but it was often 8,000 to 10,000 as shown in the following table :—

Instances where numbers on relief-works exceeded 6,000.

District.	No. of Camps.	Remarks.
Jubbulpore ...	1	Bohrihan, during January 1900.
Seoni ...	2	Ari, for about 3 months from December 1899 to February 1900. Khoont, for about 2 months, December 1899 and January 1900.
Saugor ...	1	Benaika, for about a month in broken periods during January and March 1900.
Nagpur ...	3	Bhewapur, for about 1½ months in broken periods from December 1899 to January 1900. Ambajheri, ½ month during May 1900. Thana, for 3 months from March to May 1900.
Wardha ...	10	Sailoo, Nairee, Talegaon, Jam, Rohana, Alikeli, Pulgaon, Injapur, Kutka, and Koobgaon, 2 months from December 1899 to January 1900.

District.	No. of Camps.	Remarks.
Chanda	13	Mul, Chimmur, Garchiroli, Talodi, Kothari, Armori, Chargaon, Brahmipuri, Chanda (Bandak), Warora, Dhanora, Porla and Balapur, at different periods.
Bhandara	9	Dongri, Sakoli, Khairlanji, Saongi, Korumbi, Amgaon, Adyar, Baheria and Ambora, at different periods.
Balaghat	8	Katangi, Kirnapur, Waraseoni, Lamtha, Lalbarra, Dhapewara, Borinda and Nahara, 3 months from November 1899 to January 1900.
Hoshangabad	5	Chipabar, Sodalpur, Pathrota, Maundla (in Harda) and Abgaon, for 3 months from December 1899 to February 1900.
Nimar	5	Harsud, Boregaon, Burhanpur, Kalimachak and Tawa, 1½ months between November 1899 and February 1900.
Betul	9	Masod, Satnair, Chichenda, Belmondai, Sukadchi, Kolegaon, Atnair, Patan and Tawa, at different periods.
Chhindwara	6	Amarwara, Saoli, Oomra Nalla, Panjra, Markhand, and Chourai, at different periods.
Raipur	33	Baloda, Nawagaon, Simga, Gorri, Dhamda, Durg, Deori, Kharora, Rajim, Abhanpur, Chitod, Kussumkassa, Pallari, Kurud, Gunderdehi, Kumbhari, Raipur Head-quarters, Loan, Mana, Tumgaon, Thelka, Dhamteri, Arjunda, Bemetera, Sanjari, Aranda, Hattoo, Kopra, Chharra, Maroda, Sanjari East, Koliari and Pingeswar, at different periods.
Bilaspur	16	Champa, Akaltara, Setganga, Nipania, Gorbanda, Taketpur, Jareli, (Bilaspur), Seorinarayan, Sendri, Bilaspur Head-quarters, Rahud, Taldeori, Ratanpur, Khajor, Dhuma, Dolorah and Dharas, 2 months from December 1899 to January 1900.

In some cases the numbers were even more than 20,000, *e. g.*, Chitod Camp No. 11, Raipur, daily average for week ending 27th January 20,122, Armori Camp No. 6, Chanda, daily average for week ending 2nd December 20,599.

As a rule, when this exceptional overcrowding occurred the excess was drafted to other distant works already open, or another charge was opened in the immediate neighbourhood, and the excess drafted to the new charge. But this took time, and when opened the new charge was sometimes rushed at once by people living in the vicinity and itself became overcrowded in a few days. In the Eastern Division the rush to relief-works, as already stated, was at one time so great, and the works there open so overcrowded, that it was found necessary to close works to fresh admissions till new camps could be opened to relieve the pressure. This was done to avoid complete disorganisation as the expansion of works could not keep pace with the numbers applying. Owing to the impossibility of finding work for fresh camps, it was necessary sometimes to allow charges of 10,000 to 12,000 and strengthen the establishment rather than have two independent charges mixed up on the same work. In such circumstances, a charge of 10,000 is not unmanageable with a good Officer-in-charge and a competent staff under favourable conditions, and is more economical than two of 5,000.

15. The Public Works Department Sub-Divisional Officer was the executive officer for relief-works within his district or sub-division, as the case happened to be. The control of the relief-works in a district was vested in a European officer, called the Famine Works Superintendent, specially appointed by the Chief Commissioner for the purpose. Half these Famine Works Superintendents were Staff Corps Officers, some of whom had acquired considerable experience in the previous famine; the remainder were recruited from other Departments and Provinces. The Famine Works Superintendent acted under the direct orders of the Executive Engineer; but kept himself in touch with the Civil authorities and communicated with

them freely regarding relief operations. His duty was not so much to make inspections and record criticisms as to instruct the camp officials in their duties and solve all practical difficulties on the spot. He was directed to refrain from interference in purely professional matters; but the respective functions and spheres of action of the Famine Works Superintendent and the Sub-Divisional Officer were never very clearly defined, nor was it easy to do so. Neither was theoretically subordinate to the other; but in practice their mutual relations adjusted themselves in accordance with the personal qualifications of the individuals. The experienced Staff Corps Officers and permanent Engineers of the Public Works Department acted in harmonious co-ordination; and, as a rule, the Public Works Department subordinates, whether in charge of a sub-division or otherwise, understood their position and co-operated in the right spirit. The only instances in which the relations between the Famine Works Superintendent and the Sub-Divisional Officer were not perfectly cordial, occurred in the Eastern Division and were confined to the cases where the personal qualifications of both the temporary employés concerned were not of a high order. The necessity for the appointment as Famine Works Superintendents of none but officers of undoubted social status and possessed of the necessary influence and authority, such as Staff Corps Officers, was amply proved.

16. The unit of famine-relief administration under the Public Works Department was the relief "Charge" or "Camp." Over each such charge was placed an officer of the rank of "Naib-Tahsildar," if a Civil Officer, on a salary of Rs. 100 to Rs. 150 per month, called the Officer-in-charge, who was selected and appointed by the Commissioner. These officials were drawn from all sorts of classes. Some were Naib-Tahsildars, Revenue Inspectors and clerks in Government employ; some were British Non-Commissioned Officers and Officers of the Native Army; and some were outsiders. The Officer-in-charge was deputed by the Commissioner for service under the immediate orders of the Public Works Department; and was held personally responsible for every detail connected with the charge. Cash relief to workers and kitchen-relief to their dependants and other non-workers constituted the two main divisions of relief at the Public Works Department charges. For the effective working of both these forms of relief, the Officer-in-charge was assisted by the following staff for a camp of 6,000:—

- 3 Work agents at Rs. 40 to Rs. 50 each.
- 1 Clerk at Rs. 25.
- 1 Assistant Clerk at Rs. 15
- 12 Gang Muharrirs at Rs. 15 each.
- 2 Kitchen Muharrirs at Rs. 15 „
- 2 Tools Muharrirs at Rs. 10 to Rs. 15 each.
- 1 Hospital Assistant at Rs. 30.
- 1 Compounder at Rs. 15.

There were besides a number of mates, constables, cooks, water jamadars, conservancy jamadars, &c., according to requirements. These for the most part were selected from among the workers.

The procedure for a typical day's work was as follows:—

- (i) All persons calling for relief with their dependants were admitted without restriction. The principles regulating the admission of new-comers are fully stated in Public Works Department Circular No. F-9, dated the 6th April 1900.
- (ii) Applicants were classified by the Officer-in-charge in accordance with paragraphs 21 and 22 of the General Order; the workers being formed into gangs (paragraphs 36 to 40 of the General Order), and the dependants incapable of doing any work being sent to the kitchen (paragraphs 90 to 99 of the General Order.)

(iii) The Officer-in-charge re-formed the gangs every week (Sunday evening). He allotted the gangs to the gang muharrirs and ordered the tools muharrirs to supply the necessary tools and baskets.

(iv) (a) *Every morning—*

(1) The gang muharrir mustered his gangs, checked their tools and baskets, and made the requisite entries in the gang register.

(2) The work agent saw that the task for the day was correctly calculated and entered, having regard to the nature of the work the gang was doing or the soil it was working in, set out the task and explained it to the mate; measured up the task performed on the *previous* day, and noted the fines in the case of the task gangs and the proportion of work done to task set in the case of intermediate workers.

(b) *Every evening—*

(1) The gang muharrir paid the wages after making the necessary deductions on account of fines and short work as noted by the work agent. The wages of the task gangs were paid to individuals; and those of the intermediate workers to the head-man or mate, each class of workers being told exactly what wages they were to get.

(2) The Officer-in-charge if he did his work properly, after seeing to the admission of applicants, out-door work, kitchen, hospital, camp arrangements and water-supply, &c., during the day, had then with his office staff to work till 9 P. M. or later, checking the day-books, taking back any balances remaining with the gang muharrirs and making up his own day-book and cash-book.

The step-by-step procedure as regards tasking, payments, &c., is given very clearly in Appendix V to the General Order.

17. The system of work known in the Central Provinces as the "Intermediate," and described in paragraph 25 of the General Order, was in force throughout the operations. It differed

System of work.

from the various systems described in paragraphs 208 to 212 of the Famine Commission Report of 1898, in that dependants were relieved independently of the workers. It may be broadly described as "task-work" without a minimum for the able-bodied, special gangs being formed for weakly persons on the "task-work" system, where not less than the minimum wage could always be earned, and separate provision being made in the kitchen for the residuum of incapable dependants. As a rule all "intermediate" gangs contained from 20 to 30 members. In some instances, they contained up to 50 in order to reduce the number of gangs. In carrying operations by either the "chain" or "long-lead" system, the gangs consisted of 80 including all classes. Great care was taken to have the gangs composed as far as possible of persons from the same village, and families were invariably kept together in the same gang. No trouble was experienced in doing this.

In the case of the "weakly" gangs on the purely "task-work" system, each individual member was tasked and paid separately every day. The "intermediate" gang, on the other hand, was treated as one unit, the workers being tasked and paid as one body; the mate being included in the strength of the gang both as regards the tasks and the wages. Payment was made daily to the head of the gang, who was elected by the members of the gang. The success of the system of paying the head of the gang was absolute; complaints against the headman for non-payment were rare; and the saving effected in time and trouble in making payments was immense. The payment being strictly by results, it frequently happened that the reduced amount payable to the gang was no longer

capable of division into *pice* so as to give each individual worker a definite number of pice without some surplus being left after division. This in the earlier stages created facilities for the mates or the gang muharrirs to misappropriate such surplus. To remedy this evil, a special wage-table* was brought into use, which showed at a glance the wages due for "short work" under the intermediate system for each class of workers, thus ensuring a definite number of pice being paid to each worker when the wages came to be distributed among the workers (*vide* Public Works Department Circular No. F-7, dated the 22nd March 1900). The gang muharrir when he paid the headman was ordered invariably to inform the workers what wages they were to get.

* Table showing the wages due for "short work" under the "Intermediate" system.

Full wages in pice.	WAGES IN PICE FOR SHORT WORK.							Remarks.
	Proportion of work done to task set.							
	$\frac{1}{8}$	$\frac{1}{4}$	$\frac{3}{8}$	$\frac{1}{2}$	$\frac{5}{8}$	$\frac{3}{4}$	$\frac{7}{8}$	
4	1	1	1	2	2	3	3	1. The gang muharrir simply musters the workers in the morning without calculating the wages.
6	1	1	2	2	3	4	4	
8	1	1	2	3	4	4	5	
7	1	2	3	3	4	5	6	2. The work agent in measuring up the work done on the <i>previous</i> day notes the proportion of work done to task set.
8	1	2	3	4	5	6	7	
9	1	2	3	4	6	7	8	
10	1	2	4	5	6	7	9	3. Guided by this "proportion," which most invariably be expressed in the simple one-eighth fractions, the gang muharrir calculates the wages to be paid according to this table in the afternoon, and pays the gang accordingly.
11	1	3	4	5	7	8	10	
12	1	3	4	6	7	9	10	
13	1	3	5	6	8	10	11	
14	2	3	5	7	9	10	12	
15	2	4	6	7	9	11	13	4. The working children are not to be fined.
16	2	4	6	8	10	12	14	
17	2	4	6	8	10	13	15	

18. It had at first been imagined that at the advanced stages of the famine all Public Works would have to be conducted on the task system with the minimum wage; and the system of work and forms of accounts adopted in the first instance were so designed that the "intermediate" system could be converted into simple task-work or *vice versa* at a moment's notice without the least dislocation of arrangements. The necessity for such a step, however, did not actually arise; and, as already stated, the "intermediate" was the main system of work throughout. The experience acquired of this system, and of the facility with which it can be worked with people in good condition, points to the conclusion that it is suited to all degrees and conditions of famine, provided the distress is taken in hand in time and physical deterioration is thereby prevented. During the present famine, the workers on the task system never exceeded 7 per cent. of the total numbers on relief. They † varied from $\frac{1}{4}$ to 7 per cent., the average being under 3:—

Workers—		Average proportion.	
Intermediate	82.83
Task	2.76
Non-workers	14.41
Total		...	100.00

19. The only deviations from the system of work described above occurred in the Sambalpur District, where, in the earlier stages, road work was carried out for a few months under the ordinary rates and conditions of contract for providing employment in areas where distress was apprehended, and in the Mandla District, where a simple and easily understood piece-work system on the ordinary Public Works Department methods was introduced for the relief of the aborigines. The circumstances of the Mandla District being of peculiar interest, the following paragraphs are reproduced from the review of operations in that district:—

The most remarkable feature in the famine administration of this district has been the willingness with which the aboriginal tribes responded to the efforts made by the Public Works Department to bring work-relief within their reach. They yielded readily to a severe labour-test; and with skilful management, performed almost the full tasks allotted to them, and

† *Vide* table in paragraph 5.

thereby earned sufficient wages to maintain themselves in health and condition. The organization of regular relief-camps on the lines laid down in the General Order was deemed unnecessary. Work was started on a simple and easily understood piece-work system on the ordinary Public Works Department methods. The road was divided up into convenient sections, each section employing 300 to 600 workers under the supervision of a work agent assisted by a couple of mates. The workers formed themselves into gangs, consisting sometimes of a family of 5 or 6 members, and oftener of a group of two or more families, usually not exceeding 20 in number. Each gang worked separately and was paid strictly by results. There were no infirm gangs, no kitchens, no gratuitous doles, and no rest-day wage. Only the able-bodied came to the works, the dependants being supported from the earnings of the workers or relieved at the Civil Department kitchens.

The behaviour of the Gonds, in the novel situation described in the foregoing paragraph, is thus related by the Executive Engineer, Jubbulpore Division :—

"At first it was feared that the Gonds would not understand this piece-work system and would be frightened away from the works. A minimum wage was accordingly fixed by the Commissioner for Gonds on the 13 seers wage-basis. Experience showed, however, that the Gonds were as eager as any to earn all they could, and the minimum wage very soon fell entirely into disuse. This was mainly owing to the tact and good sense shown by Mohamed Ismail and his subordinates in their dealings with the workers. The experiment of carrying on relief-work through a contractor was tried successfully. The contractor was employed principally on the repairs to the Shahpura-Kundam Road. This section is the furthest from the head-quarters of the sub-division, and this method was found to be a great convenience. The work also was of a kind, the measurement of which could be easily checked. Measurements were made, and the contractor's bills paid weekly by the Sub-Divisional Officers at normal rates. The contractor on his part paid the workers daily at the rates in force on the rest of the works. This left him the necessary margin of profit. The workers were free to go to the contractor or to the Public Works Department works at their own will. The fact that they went to the work nearest their homes shows that the rates were fair and evenly balanced. * * * The experience gained seems to show that where work is plentiful and numbers are not too large, the system described above is efficient and very economical."

20. The classification and wage scale originally adopted in the General Classification of workers. Order coincided with those advocated by the Famine Commission of 1898 in paragraphs 445 and 456 of their report. They were subsequently modified to some extent in accordance with Famine Circular No. F-41, dated the 22nd January 1900. The following table compares the original (column A) and revised classification and wage scale (column B) with those recommended by the Famine Commission (column C) :—

		Column A.	Column B.	Column C.
Special mates, &c.	...	2 pice more than diggers.	1 pice more than diggers.	Not specified.
Diggers	...	20 chittaks	19 chittaks	20 chittaks.
Adult carriers	...	15 "	15 "	15 "
Working children	...	8 to 12 years, 8 chittaks.	8 to 14 years, 8 chittaks.	8 to 12 years, 8 chittaks.
Adult dependants and minimum wage	...	12 chittaks	12 chittaks	12 chittaks.
Non-working children	...	Over 8 years, 7 chittaks.	8 to 14 years, 8 chittaks.	Over 8 years, 7 chittaks.
Do.	...	Under 8 years, 5 chittaks.	Under 8 years, 4 chittaks.	Under 8 years, 5 chittaks.
Babes in arms	...	1 pice	1 pice	.....

The classification was in fact regulated more by considerations of physical condition and development than those of sex or age; very few women were ever employed as diggers, and where so employed they were tasked and paid as Class II. Practically, Class I consisted of all robust adult males; Class II of all females, some old and feeble men, and immature youths; and Class III of children of both sexes between the ages of 8 and 14 capable of work. It was sometimes even necessary to place the weakly men and women in Class III for

purposes of tasking in order to avoid the breaking-up of families and the formation of separate gangs for only a few persons, the persons concerned themselves preferring to earn less by staying with their own people than they could do by working in separate gangs where they could have earned the minimum wage, although such cases were rare. This simple, common-sense method of classification was fully justified by results. Great convenience was secured in the matter of organizing gangs, and a considerable saving was effected in the wages of male adults, who thrived well notwithstanding their reduced earnings. Of the total number of male workers, no less than 26 per cent. were in Class II. The actual proportion of men and women in Class II is exhibited in the following table:—

Statement showing the proportion of men and women amongst the Class II workers.

Division.	Districts.	CLASS II WORKERS.			PERCENTAGE.		Remarks.
		Men.	Women.	Total.	Men.	Women	
		Thousands.	Thousands.	Thousands.			
JUBBULPORE.	Jubbulpore	251	1,770	2,021	12	88	Piece-work in force. Only women were carriers
	Seoni	212	1,641	1,853	11	89	
	Mandla	...	169	169	.	100	
	Saugor	348	1,570	1,918	18	82	
	Damoh	...	...	..	.	..
NAGPUR.	Nagpur	367	2,160	2,527	15	85	N.B.—The maximum proportion was 28 per cent., and the average 17 per cent
	Wardha	844	4,746	5,590	15	85	
	Chanda	1,222	6,977	8,199	15	85	
	Bhandara	1,729	6,538	8,267	21	79	
	Balaghat	2,161	5,521	7,682	28	72	
NERBUDA.	Hoshangabad	608	3,079	3,687	16	84	
	Betul	630	5,834	6,464	10	90	
	Nimar	489	2,319	2,808	17	83	
	Narsinghpur	6	73	79	8	92	
	Chhindwara	443	4,371	4,814	9	91	
CHHATTIS-GARH.	Raipur	3,453	18,913	22,366	15	85	
	Bilaspur	2,267	8,691	10,958	21	79	
	Sambalpur	69	275	344	20	80	
	Total for the Province	15,099	74,647	89,746	17	83	

21. Tasks were fixed by the Public Works Department Sub-Divisional Officers acting under the Executive Engineer's orders and with due regard to the standard tasks. In the first instance these tasks were fixed in consultation with the Deputy Commissioner, but the Sub-Divisional Officer was held responsible for seeing from time to time that they were neither excessive nor inadequate. In this, however, he might be assisted by any Inspecting Officer. Generally speaking, full tasks as detailed in the General Order were exacted at the outset, where the class of work was such as the workers were used to. If new to them the tasks were pitched low and gradually raised during the first week of a gang's existence. Subsequent changes were rather in the direction of greater severity than otherwise, so long as the climatic conditions were not unduly trying, the tasks being gradually enhanced as the workers got inured to the conditions and discipline of camp life. The excessive heat of May and June led to a temporary relaxation; but the task-tables were again

pitched high as soon as the rains set in and the severity of the weather was mitigated. In all doubtful cases the tasks were based on actual experiment. The fulfilment of tasks depended as much upon the working capacity of the labourers as upon the tact and capability of the work-agents to whose care they were entrusted. On the whole it may be said that the workers performed a very fair proportion of the tasks assigned to them. Except for a brief period in the Chhattisgarh Division, where for the time being the numbers had swelled to unmanageable dimensions, discipline was enforced in all the camps with commendable rigour, and a full eight hours' task was exacted from all. This required some insistence, as many of the workers were inclined to be content with what they could earn with five hours or so of desultory work. Even the infirm unless absolutely incapable were subjected to a labour-test, tasks being adjusted to the varying strength and capacity of the workers.

22. The standard tasks laid down in paragraphs 46 and 47 of General Order No. 287—7630-F. were in force at the commencement of operations, *viz.*, 70 cft. pit measurement for soft earth-work, with the task for other soils in proportion. These were gradually raised to 80, 85, 90 and as high as 110 cft. in soft soil. In metal breaking the task varied so much on different charges and at different times on the same charge, according to the nature of the stone, that sometimes the task exacted when the work started had to be lowered and again raised several times. Roughly speaking, the initial tasks were 3 cft. and 2 cft. for Class I and II, respectively, in hard stone like basalt; and $4\frac{1}{2}$ cft. and 3 cft. in soft stone like quartz, sandstone and the soft laminated clay stones of Chhattisgarh. These tasks were gradually raised in the course of the first few weeks of a gang's existence, until they reached $4\frac{1}{2}$ and 3 cft. for hard basalt and 6 and $4\frac{1}{2}$ cft. for softer stone, and even as high as 9 and 6 cft. 110 cubic feet of soft earth excavation is the full task for an average able-bodied labourer in ordinary times. The Famine Commission of 1898 recommended that men should be classed as diggers or Class I, who were able to do 75 per cent. of an ordinary able-bodied labourer's task. The task for a digger working in soft earth should thus have been $82\frac{1}{2}$ cubic feet; but when the table of tasks in the General Order was being framed, the Chief Commissioner (Mr. Ibbetson) desired that the task be so fixed that a famine coolie in reduced condition could with ordinary diligence make certain of performing it. In the recent famine it cannot be said that any of the workers were in the reduced physical condition allowed for when the initial task was fixed at 70 cubic feet for a digger in soft soil. On the contrary the condition and working capacity of most of the workers differed but little from the condition of labourers in ordinary times. It was therefore possible to raise the tasks so as to approximate to nearly the full ones for ordinary labourers, both on earth-work and metal breaking. The fixation of tasks on the latter was largely a matter of experiment owing to the varying nature of the material met with, different qualities of stone being sometimes met with on the same charge. That the examples of tasks given as suitable for famine-stricken workers in the General Order were possibly inadequate, and therefore not a real test of distress, having regard to the comparatively robust condition of the people, was impressed on all officers whose duty it was to fix tasks, and great care in making the task a real test was enjoined. This was no easy matter, as there was on nearly all works a number of persons who under no circumstances could be made to do a full task, being quite content to earn a certain proportion of the full wage. If the task was lowered under the impression that it was too high, these people instead of doing the same amount of work that they formerly did, reduced their efforts in proportion. The presence of these people—not in urgent need of relief—on the works rendered the fixing of tasks so as to be a real test of distress a matter of no little difficulty. If tasks were made so stiff as to reduce the number of pice that these people could earn by the amount of labour they were prepared to give, below what they considered it worth their while to stay on the works for, the conditions bore with excessive severity on those who were entirely dependent on their wages and had nothing wherewith to supplement their earnings on the relief-works. The only way to eliminate the class of persons referred to is a system of selection, such as a distance test. When this was applied it was invariably effective.

No allowance was made for the distance the workers had come from the place where they slept at night. At the commencement of the hot weather tasks were reduced so that rest might be taken by the workers during the great heat of the day between 12 and 3 P. M. Tasks were raised again at the commencement of the rains (in July), partly with a view to inducing people to leave the works, which they appeared disinclined to do.

In March weakly gangs were formed of "nursing mothers." Some women with babes at the breast, who remained in the intermediate gangs with their relatives at their own request, were only given a half task. From the end of January children between the ages of 12 and 14 had their tasks reduced from those of Class II to those of Class III, but at the same time their wages were also reduced.

23. The principal difficulty in the matter of tasking consisted in the undue proportion of women, feeble men and children. It will be seen from the table given in paragraph 5 that the percentage of men, women and children on the total numbers on all forms of relief was as follows :—

Men	...	...	33
Women	...	...	42
Children	...	...	25
			<hr/> 67
			100
			<hr/>

Amongst the workers only, the proportion of Class I men was still lower :—

Class I (including special)	...	...	28
„ II	...	...	58
„ III	...	...	14
			<hr/> 72
			100
			<hr/>

This gives a proportion of about $2\frac{1}{2}$ carriers per digger on earthwork. A very large proportion of the work done by relief-workers consisted of earthwork in roads, where the lead and lift never exceeded 50 ft. and 5 ft., respectively; and in railway earthwork where this lead and lift was but rarely exceeded. On these works the proportion of carriers to diggers should have been as 1:1. Under these circumstances the vast hordes of Class II workers or carriers were never, and could not be, fully tasked. Even when working on tanks, where the leads and lifts were greater, the carriers, except in a few rare cases, were never called upon to do a full carrier-task according to the General Order. The difficulty was to a certain extent met by employing the more robust of the women and youths in Class II in digging, giving them a half digger-task and paying them the Class II wage. Still with such an undue proportion of Class II workers or carriers to diggers on road earthwork, it is very difficult to prevent the rates being high and the labour-test as affecting the carriers non-effective. In the case of earthwork the task for a gang must be calculated on the tasks due from the diggers, who may form but about one-fourth of the total numbers. So long as these diggers do their task the whole gang gets credit for having performed a full task, whereas, as shown above, the carriers may only do about 40 per cent. of what they should. On other forms of labour, such as metal breaking and carrying metal and moorum, each individual member is tasked and the task due from the gang is the aggregate of the individual tasks, so that all have to work alike to earn full wages. This points to the superiority of metal breaking and carrying over road earthwork as a form of employment for relief labour when the carriers, or Class II, are out of proportion to the diggers, or Class I.

Great attention was from the outset paid to the carriage of metal and moorum by head-loads, which formed the principal source of useful employment for Classes II and III workers. Instructions were given in Appendix XXIV to

General Order No. 287-7630-F, dated the 20th September 1899, and subsequently amplified in Public Works Department Circular No. 4-F—1314, dated the 5th February 1900, regarding the system of carrying by relays. Under this system each gang was to work over a short distance, usually 400 feet, carrying full baskets in one direction and returning with empty ones. This system succeeded admirably in a few places; but as a rule it was found difficult to work. In order that the system should work properly, it was essential that each gang in the chain should be of exactly the same strength or carrying capacity, should move at the same pace, and should be equally diligent. The absence of one or two carriers in a gang or the laziness of any particular gang threw the whole chain of gangs out. The workers in a gang were dependent on the diligence of the other gangs and were liable to be paid short wages for the fault of others. In some instances, with the expenditure of infinite trouble in camps where the discipline was exceptionally good, the system was got to work with fair results. In several places caste interfered with it. Workers objected to exchange baskets with persons of other castes and the time taken every morning in getting the chain of gangs into order, seeing that they were all of equal strength, and filling up the places of absentees, was a severe tax on the staff, and the time so occupied allowed of only small tasks being done. The workers themselves had the very greatest objection to it, and much preferred the system of direct lead, in which each gang worked quite independently of others. On this system each gang, the exact number of workers in which was immaterial, carried the metal or moorum as the case might be from the quarry to the road side or dépôt direct. The task of each gang was set out and measured, and the gang was paid accordingly, and was therefore not subject to punishment for the laziness of others. The short-lead or chain system was abandoned in most charges in favour of the system of continuous leads, and the introduction of the long-lead system was sanctioned in Public Works Department Circular No. F-10, dated the 7th April 1900. As a rule, more satisfactory results were obtained and discipline did not materially suffer. Dépôts were formed at intervals so as to limit the lead to 1 mile in order to avoid the strain of carrying a load continuously without relief becoming too great. But the lead was subject to frequent variation; so was the size of the basket in which metal was carried. The constant adopted in the General Order (Appendix IV to the General Order) for the maximum duty of a carrier-unit, *viz.*, 10,000, had therefore to be frequently adjusted to the actual circumstances of each case. Roughly, 2 to 3 cft. carried one mile, equivalent to approximately 11,000 and 16,000, were adopted as constants; but even these were occasionally too low. Actual observations of the work done at the Ambajheri Tank by 12 gangs with a uniform lead and task gave the following results:—

Reduced lead	...	...	700 ft.
Task	...	...	800 cft.
Theoretical number of carrier-units required with			
a constant of 10,000	$= \frac{800 \times 700}{10,000}$		= 56
Actual number of carrier-units	...	...	17
Actual duty per carrier-unit	$= \frac{800 \times 700}{17}$		= 33,000

The conditions of supervision and skill of workers were in this case perhaps too favourable; but the general conclusion seems to be that the task per carrier-unit of 10,000 is too low and that it should more nearly be 15,000.

It was laid down in Public Works Department Circular No. F-10, dated the 7th April 1900, that when men and women worked together as carriers both should belong to Class II, and that even when men worked alone it was better to give them a reasonable burden to carry (as members of Class II) than pay them more for carrying too heavy a burden. Only really strong men capable of carrying 50 per cent. more than Class II should be included in Class I, and then only when working in separate gangs, where they could not shirk part of their task at the expense of the Class II.

24. The real test of the adequacy of the task performed lay in a frequent examination of the actual outturn and rates of work. This was prescribed in Public Works Department Circular

Rates of work based on tasks performed.

F.-4, dated 5th February 1900, and regularly insisted on by the Executive Engineers and Sub-Divisional Officers; and it afforded practical data for the revision of the task-tables. It would be impossible to reduce the rates for all works, which varied in each gang according to its composition, but careful observations taken by the Superintendent of Works in the Wardha District showed actual working rates of Re. 0-3-8 to Re. 0-4-9 for earthwork against a normal rate of Re. 0-4-0 per 100 cft.; Re 0-9-0 to Re. 0-10-0 for moorum against Re. 0-10-0 per 100 normal contract rate; and Rs. 2-8-0 for metal-breaking per 100 for common basalt, Rs. 3-6-0 for very hard basalt, and an average of Rs. 2-15-9 per 100 against normal rates varying from Rs. 2-0-0 to Rs. 3-8-0 per 100 cubic feet. The charges on which these observations were made were however above the average in organization and discipline. Six sets of observations of the rates for carrying metal by head-loads gave the following results:—

				Rs.	a.	p.
(1)	Actual working rate per 100	...	...	4	7	6
(2)	Do. do.	...	...	4	2	0
(3)	Do. do.	...	...	6	8	8
(4)	Do. do.	...	...	4	5	0
(5)	Do. do.	...	...	6	10	6
(6)	Do. do.	...	...	4	9	0

or an average of Rs. 5 per 100 cubic feet for a lead of one mile. This rate was doubtless very high compared with the normal rates for conveying by carts; but this method of carrying was in many cases the only form of profitable employment for large numbers of workers and was, moreover, the only means of preventing large accumulations of material at quarries far away from the road-side, which formed an unfortunate feature of the famine of 1896-97.

25. The scale of wages as originally laid down in the General Order and as subsequently modified by Famine Circular No. F-41, dated the 22nd January 1900, has already been referred to. The Deputy Commissioner periodically fixed the price to be taken for the grain-basis on which the wages were calculated; and they almost always usually pitched it lower than the prevailing market prices, subject to a limit of 25 per cent. New-comers were at first given the minimum wage on the day of arrival; but subsequently they were allowed a meal in the kitchen if in need of it. A rest-day wage was given to workers on the intermediate system at the start, but was abolished later on. Nor was it found necessary to allow these workers to earn more than the full wage in order to support themselves on the rest-day. They appeared to be able to do this, even without getting more than a full wage, and it did not seem necessary to do more than abolish the rest-day wage. The rest-day wage gave great trouble to the staff and caused great expense to Government, and it was more than doubtful if all the workers got the money. The test to qualify for the rest-day wage was that the worker should have been on the works for the three preceding days. The gangs were re-formed on Sunday (the usual rest-day) and the rest-day wage paid on Monday. It was a matter of considerable difficulty to identify the workers that had been on the works on the three days preceding the Sunday. The mates, and with them the gang muharrirs, had great opportunities of appropriating the money due for the Sunday wage to the workers who did not happen to be in the re-formed gangs on the Monday. The general experience of all officers was that except under very special circumstances a rest-day wage should not be paid to workers on the "intermediate" system, but that it should be paid to gangs on the "task-work" system which were composed entirely of weakly persons. As nearly all works were on the "intermediate" system, there was, moreover, no question of limiting earnings to the minimum wage in the case of short work. The instances are very rare where less than half the full wages were paid. The minimum wage was, indeed, too high. There was not sufficient difference between the full and minimum wage to induce people working on "task-work" to exert themselves to do anything like the full task where the system was in force generally.

for the able-bodied and weakly alike. With weakly gangs only on "task-work" it was more a question of maintaining them and improving their condition than of obtaining work from them. On the "intermediate" system workers frequently were satisfied with doing enough to earn less than the minimum wage. These were people who were really not in urgent need of relief, but were quite prepared to do a little work in order to procure a few pice to supplement their other means. The problem was to separate such people and prevent them from handicapping those who really were in need of all that they could possibly earn and were prepared to work hard to earn full wages.

26. Instances were not rare in the earlier stages of the operations, where workers were saving considerably on their earnings. Certain experiments in the Seoni District revealed the fact that the workers were saving two to one pice per head, amounting to a percentage of 20 to 10 on the wages actually received. Enquiries in Jubbulpore, Raipur, Bhandara, Betul and elsewhere elicited a somewhat similar result. The curtailment of wages and stricter enforcement of tasks and discipline enjoined in Famine Circular No. F-41, dated the 22nd January 1900, and more particularly the reduction of the mate's wages, served in a great measure to remove the less needy from the works and to limit the earnings of the workers left behind to the bare subsistence rate of wage.

27. The term "fining" which is too often used in connection with the earnings of the "intermediate" workers is a misnomer. There was no such thing as fining in their case, it being limited to the few workers on the "task-work" system, which was confined to the weakly and the aborigines. Workers on the main "intermediate" system were paid up to the maximum wage strictly by results, and the only check consisted in (1) the stiffening of tasks and (2) the lowering of the wage-basis. As the gangs were tasked and paid as a body it is impossible to show with any approach to accuracy the exact wages earned by each class of workers. The gangs were paid on the assumption that the children (Class III) would receive full wages whatever the quantity of task performed, and that the remaining classes, I and II, would receive payment in the ratio of work done to task set, their wages being respectively the equivalents of 19 chhitaks and 15 chhitaks in the event of full task being accomplished. Supposing the assumption to hold good in the actual distribution of wages and the earnings of Classes I and II to be in the ratio of 19 : 15, the approximate earnings of the three classes of workers would be as tabulated below. Table I exhibits approximately the effect of short work on the wages of the workers and Table II the effect of the fictitious wage-basis on the purchasing power of the earnings :—

TABLE I.

District.	FULL WAGES.			ACTUALLY EARNED.			Approximate percentage of full wages actually earned.	Remarks.
	Class I.	Class II.	Class III.	Class I.	Class II.	Class III.		
	Pice.	Pice.	Pice.	Pice.	Pice.	Pice.		
Jubbulpore	6	4	2	4'9	3'9	2	82 to 98	Class III is supposed to earn full wages and the wages of Classes I and II are in the ratio of their full wages, viz., 19 : 15.
Seoni	6	5	3	6'0	4'7	3	94 to 100	
Mandla	7	6	3	7'0	5'5	3	92 to 100*	
Saugor	6	5	3	5'7	4'5	3	90 to 95	
Nagpur	7	6	3	6'2	4'9	3	82 to 88	
Wardha	7	5	3	6'3	5'0	3	90 to 100	
Chanda	8	6	3	6'6	5'2	3	82 to 87	
Bhandara	7	6	3	5'9	4'7	3	78 to 84	
Balaghat	7	6	3	6'5	5'1	3	85 to 93	
Hoshangabad	7	5	3	5'7	4'5	3	81 to 90	
Betul	8	6	3	7'0	5'5	3	88 to 92	
Nimar	8	6	3	5'7	4'5	3	71 to 75†	
Narsinghpur	6	5	3	6'0	4'7	3	94 to 100	
Chhindwara	7	5	3	6'5	5'1	3	93 to 100	
Raipur	7	5	3	6'1	4'8	3	87 to 96	
Bilaspur	7	5	3	6'2	4'8	3	89 to 96	
Sambalpur	8	6	3	7'3	5'7	3	91 to 95	

* Piece-work system was in force.

† A large percentage were aborigines who worked on "task-work" and only earned the minimum wage.

TABLE II.

District.	Average wage-basis.	Average market price of the cheapest grain.	STANDARD ALLOWANCE ON AVERAGE WAGE-BASIS.			Percentage that average wage-basis was below average market price of cheapest grain.	Remarks.	
			CLASS I.	CLASS II.	CLASS III.			
			19	15	8			
			Purchasing power of wages* actually earned in cheapest grain.					
	Seers.	Seers.	Chittaks	Chittaks.	Chittaks			
Jubbulpore	...	13½	12	14 7	11 7	6 0	12	* These are obtained from Table I. † Work was carried out on the piece-work system. The average price of the cheapest food-grains for the whole district was 11½ seers. The market price on the works, however, averaged 8 seers. A uniform wage-basis of 10½ seers was maintained throughout.
Seoni	...	12	10½	15 8	12 3	7 8	14	
Mandla	...	10½	8	14 0	11 1	6 0	31†	
Saugor	...	12	11	15 7	12 4	8 2	9	
Nagpur	...	10½	10	15 5	12 2	7 5	5	
Wardha	...	11½	10½	16 5	13 1	7 9	10	
Chanda	...	10	9½	15 7	12 4	7 1	5	
Bhandara	...	10½	9½	14 1	11 2	7 1	10	
Balaghat	...	10½	9½	15 4	12 1	7 1	10	
Hoshangabad	...	11	10	14 2	11 2	7 5	10	
Betul	...	9½	9	15 6	12 4	6 8	6	
Nimar	...	10	9½	13 6	10 7	7 1	5	
Narsinghpur	...	12	10	15 0	11 8	7 5	20	
Chhindwara	...	11	9½	15 4	12 1	7 1	16	
Raipur	...	11½	10½	16 0	12 7	7 9	10	
Bilaspur	...	11½	10½	16 2	12 7	7 8	10	
Sambalpur	...	10	10	18 2	14 2	7 5	.	

N. B.—The limit to which wage-basis could be lowered was 25 per cent. below market price.

28. The effect on the earnings of the two automatic checks of (1) tasks and (2) wage-basis is exhibited more clearly and with less involved error in the following table, which shows the earnings per *reduced* Class I male-unit :—

TABLE III.

District.	WAGES EARNED PER *REDUCED CLASS I UNIT		ALLOWANCE PERMISSIBLE UNDER GENERAL ORDER PER CLASS I UNIT.		Approximate percentage of full wages earned.	Approximate percentage of (General Order) grain allowance earned.	Remarks.
	Pice.	Chittaks of grain.	Pice.	Chittaks.			
Jubbulpore ...	5 0	15 0	6	19	83	79	* The workers are reduced to Class I in the ratio of their respective full wages to full wage of Class I; i. e.— Class I : II : III = 19 : 15 : 8.
Seoni ...	6 0	15 8	6	19	100	83	
Mandla ...	7 0	18 4	7	19	100	97	
Saugor ...	5 9	16 2	6	19	98	85	
Nagpur ...	6 3	15 7	7	19	90	83	
Wardha ...	6 4	16 8	7	19	91	88	
Chanda ...	6 7	15 9	8	19	84	84	
Bhandara ...	6 1	14 5	7	19	87	76	
Balaghat ...	6 5	15 4	7	19	93	81	
Hoshangabad ...	5 9	14 7	7	19	84	77	
Betul ...	7 0	15 7	8	19	87	83	
Nimar ...	5 9	14 0	8	19	74	74	
Narsinghpur ...	6 0	15 0	6	19	100	79	
Chhindwara ...	6 5	15 4	7	19	93	81	
Raipur ...	6 2	16 3	7	19	89	86	
Bilaspur ...	6 2	16 2	7	19	89	86	
Sambalpur ...	7 3	18 2	8	19	91	96	
Averages ..	6 3	15 8	7	19	90	83	

29. The highest wages were earned in Seoni, Mandla, Saugor and Narsinghpur, where labour was principally employed on simple earth-work in roads, village tanks and embankments; and the lowest in Nimar, where the aborigines often earned only the minimum wages and workers were largely employed on carrying moorum and metal and breaking metal. On the whole, it would appear that the workers earned only 83 per cent. of the General Order allowances, 10 per cent. being lost through short work and 7 per cent. on account of the lowered wage-basis. It might be argued from these figures that the wage-scale ultimately adopted in accordance with Famine Circular No. F-41, dated the 22nd January 1900, was unduly liberal. Doubtless it was so, if the operation of the task and wage tests is excluded from consideration. The figures point unmistakably to the conclusion that something like 16 chhitaks would have sufficed for Class I, 13 chhitaks for Class II and 8 chhitaks for Class III. The excellent condition in which the workers were maintained bears a striking testimony to the sufficiency of such a wage-scale. But to maintain labourers in good condition is easier than to restore weakened labourers to good condition; and to reduce the scale to so low a standard would be to destroy the elasticity of the "intermediate" system and to discard the two saving elements of tasks and wage-basis which mainly contributed to a healthy adjustment of the earnings of the workers to the varying conditions of relief.

30. Kitchens were opened under the management of the Public Works Department at all relief camps, for the special benefit of the incapable dependants of workers who could not offer labour in return for relief. Any starving people unconnected with the works who applied for food, especially thin and emaciated children, and persons who brought an order of admission from a Circle Officer or officer of superior rank, were also temporarily admitted. All persons who might without real hardship be required to labour were sternly excluded from the kitchen. The General Order made no distinction between a dependant who did nominal work and a dependant who did no work at all; in actual practice, however, although all were sent to the kitchen, those of the first description were formed into what were called the "infirm" gangs and employed on light forms of work suited to the capacity of each individual. Thus there were often two sets of gangs for the feeble;—the "weakly," composed of persons of comparatively superior physique who worked on task-work principles, and the "infirm," who were fed in the kitchens. In the Chhattisgarh Division there was at first some misapprehension of orders on the subject, and the "infirm" were given minimum wages instead of being relieved in the kitchen. This was subsequently rectified. The only form of relief offered to non-workers was cooked food or *khichri*, except in the case of a babe at the breast, where the money dole for the child (one pice) was paid to the working mother. The non-working mother received an extra dole of *khichri* in consideration of the infant in arms. Some District Officers were in favour of dry-grain doles in exceptional cases, but this was peremptorily disallowed, as being liable to abuse. Reluctance to cooked food soon gave way to the pressure of necessity, and the kitchens, as a rule, afforded an admirable test of distress while contributing greatly to the maintenance of children in excellent condition. The success of the kitchens as regards the children suggests the desirability of relieving all children, whether working or non-working, in the kitchens. The spectacle of children neglected by their guardians would thus disappear, and a most stringent check would be imposed on the tendency of the collective earnings of a family exceeding the requirements of bare subsistence.

31. The food given was a *khichri* of boiled rice and dhal in the proportion of 5:1 with the addition of some salt, ghee or oil, and condiments. The standard measure held the cooked equivalent of 3 chhitaks of dry grain. Three of these measures were given to each adult and one to two and a half to each child according to age. All were compelled to eat in the kitchen enclosure under sheds. At first they were allowed to take away what they could not eat, but this was stopped as it led to abuses. As a rule meals were distributed twice daily, usually a light meal such as *ambil* at 9 A. M., and *khichri* at 4 P. M.

Where kitchens were very crowded, only one meal could be given till the establishment of branch kitchens. One meal appears to be sufficient. Brahmin cooks or other high-caste cooks were employed. In Chhattisgarh, where there were large numbers of Chamars, these people were fed in a separate part of the kitchen-sheds and Chamar cooks employed for them as they objected to food cooked by men of any other caste. The same where Gonds predominated and where Gond cooks were employed. Some reluctance was shown at the commencement by the higher castes in the hope of obtaining cash doles or dry-grain rations in lieu of cooked food; but it soon disappeared with the exercise of a little firmness. Of course, there was always village-relief to fall back on; but that was itself a test, for it involved leaving friends. The kitchen muharrir was in immediate charge of the kitchen under the orders of the Hospital Assistant. The Officer-in-charge exercised supervision and check over both. The Sub-Divisional Officer, Public Works Department, the Famine Works Superintendent, and all other Inspecting Officers (including Civil Surgeons) frequently inspected the kitchens.

Proportion of workers and non-workers.

32. The average proportion of workers and non-workers was as follows (*vide* table given in paragraph 5):—

Workers—

Intermediate...	...	...	...	...	82·83
Task ...	...	...	...	...	2·76
Non-workers	...	...	...	...	14·41
Total					100·00

The proportion of dependants had a tendency to follow the rise and fall in the total numbers; but towards the close of the operations it remained at a high level in spite of the rapid diminution of numbers, because the able-bodied were the first to return to their homes, leaving their dependants behind to enjoy the benefit of the kitchens. The high proportion in the Chhattisgarh Division in August and September arose from the substitution of cooked food for cash wages to the working children, who were thus returned as gratuitously relieved.

33. Every conceivable care was taken to preserve the able-bodied in good condition and to improve the condition of those who arrived in a weak or emaciated state. The nursing mothers were specially looked after and very lightly tasked; the sick were taken care of in the field-hospitals, which were fully equipped for all emergencies, and the infants and invalids were liberally fed on special diet. In the trying months of April and May, the labour conditions were made as indulgent as possible consistently with discipline, and shelter was provided during the rains where necessary. An abundant supply of food-stuffs of good quality was maintained at all relief camps throughout the operations; and sanitary measures were enforced with the utmost regularity. The very greatest trouble was taken on large relief-works to secure a pure supply of water as far as possible. New wells were dug in hundreds on the banks and beds of rivers, and all sources of water-supply for the relief-works were carefully protected and guarded to prevent contamination. All sources of supply were periodically disinfected with permanganate at least once a week, and this was done every second day if cholera was about. Special measures were also adopted to remove all chances of contamination in the distribution of water to the workers. The hand-to-hand distribution of water and the dipping of *lotas* in water vessels were done away with; and iron vessels with covers and taps were substituted as far as practicable for the earthen vessels (*nands*) as originally prescribed in the General Order for the *piaos*. The method of distribution is fully described in Superintending Engineer's Circular No. F-24-S., dated the 18th May 1900.

The effect of a pure and abundant supply of water on the condition of the workers throughout the Province was a marked feature of the relief operations. They were maintained in excellent health even in the remotest and least accessible parts of the Province, and enjoyed immunity from cholera while it was raging in the surrounding villages. Outbreaks of cholera in the relief camps caused by

new-comers from infected areas were promptly and easily suppressed. The high mortality in the Nimar District formed the subject of a special investigation. The immunity enjoyed by the workers as a whole is thus described by the Administrative Medical Officer* : "The influence of this cause (scarcity of water) has lately been shown in a striking manner by the immunity from cholera which the workers at the relief camps, where a tight hold was kept over the water-supply, enjoyed, compared with the residents of the surrounding villages."

Immigrants and their influence on the general mortality at relief camps.

34. Large numbers of foreigners immigrated from the adjoining Native States in the following districts :—

- (i) *Saugor District*.—The immigrants were chiefly from the Rajputana States, Bhopal, Gwalior and Lalitpur, and as a rule arrived in miserable condition. The *Marwaris* alone numbered 2,000 average daily or over one-sixth of the average relief population of the district (11,700). They lingered on the works till the close of the operations.
- (ii) *Hoshangabad District*.—The immigrants were chiefly Marwaris, Bhopalis and Beraris. A census taken in March 1900 showed that at one work alone there were 2,933 foreigners out of a total of 6,690, and that altogether there were nearly 7,500 of them on the works, representing over one-fourth of the total attendance of March (28,878).
- (iii) *Nimar District*.—There was a considerable influx of foreigners from the Bombay Presidency, Berar and the adjoining Native States in Central India ; but no statistics are available.
- (iv) *Wardha District*.—The numbers on works in this district were swollen by the influx of persons from the Berars, but no estimate of their actual number can be made.
- (v) *Chanda District*.—Numbers of immigrants from the Wun District of the Berars were found on the charges at Warora, Chanda and Kotari. No census was however taken.

The immigrants as a rule arrived in a state of general debility and great fatigue. Captain Creagh, Famine Works Superintendent, Hoshangabad District, reports that "many infants were brought to the work suffering from marasmus, a hereditary and wasting disease which was practically incurable." The death-rate on the Public Works in the Hoshangabad District (average relief population 24,284) was 29·7 per *mille* from all causes and 15·2 excluding cholera and small-pox. The mortality was highest in (1) the Nerbudda Camp, which contained a number of ill-conditioned Banjaras and Bhopalis ; (2) Apgaon, where 120 out of 273 workers were foreigners, and (3) Chipabar, where the proportion of foreigners was 99 : 236.

35. The total number of deaths registered on the Public Works amounted to nearly 11,500. The average relief population for the whole period of operations being 534,521, the total mortality in the Public Works Department camps works out to 21·6 per *mille* from all causes and 13·9 excluding epidemics. The highest mortality occurred in the Chanda and Nimar districts where the rates were 55·6 and 45·0 respectively from all causes and 30 and 39 excluding cholera. This was due in large measure to the deaths among the new-comers from infected areas and, in the case of Nimar, also to the influx of foreigners from the adjoining Native States in a more or less enfeebled condition.

36. Intimately connected with the subject of the condition of workers on the large Public Works are the questions of (a) the undue attractiveness of these works where they existed close to the small village works, and (b) the relief that

Attractiveness of Public Works.

* *Vide* Administrative Medical Officer's Report on the vital statistics of the Nimar District, to the Chief Secretary to the Chief Commissioner, dated the 9th August 1900.

could be afforded on such works during the rains. As a rule the village works were so designed as to act more or less as auxiliaries to the large Public Works; and did not really compete with them. In some cases, their spheres of action were entirely distinct and apart; as, for example, in the Jubbulpore District, where the Northern or Murwara Tahsil was given over entirely to village works, while the Sihora Tahsil and the distressed part of the Jubbulpore Tahsil were provided for by Public Works. Special precautions were enjoined in Famine Circular No. F-6-3364, dated the 14th August 1899, to reduce the attractiveness of village works by paying wages appreciably lower than those paid on the Public Works. As soon, however, as the workers got accustomed to the tasks exacted and discipline enforced at the Public Works Department works, they showed a decided inclination in favour of the Public Works where these were in close proximity to the village works. The extra wage was only one of the many attractions that the superior organization of the Public Works offered. There was first of all the certainty of a daily payment. Then there were so many Inspecting Officers acting in various capacities and making frequent investigations into all branches of work-relief that the worker could always safely count upon his grievances being heard and promptly redressed. The incapable dependants were sure of their daily meals in the kitchens, and the sickly and infirm of gentle treatment in the hospital. The water-supply and conservancy arrangements were the best that could be devised, and the strict control maintained over the *bania* ensured an uninterrupted supply of all articles of food at reasonable prices.

The above remarks do not apply to Chhattisgarh, where for a time the Public Works were hopelessly overcrowded (January 1900) and the labour-test was more nominal than real. The expansion of village works and stoppage of admission to Public Works Department charges were for the time being absolutely necessary to bring the Public Works Department organization into thorough order. When once the main essentials to the reality of the labour-test, *viz.*, fulfilment of adequate tasks and observance of discipline, were restored, the Public Works in Chhattisgarh lost a good deal of their attractiveness and the two systems of works ceased to interfere with each other so much.

37. The general experience of the Province points to the conclusion that certain sorts of works can be profitably continued during the rains where the people are in good condition; particularly—

- (a) metal breaking for roads or railways at depôts or alongside main roads;
- (b) moorum spreading and consolidation on roads;
- (c) earthwork in *ghâts* and well-drained ground and where the work is not spread out over too long a length of road; anywhere, in fact, except on level black-soil plains; and
- (d) earthwork in tanks where the earth for raising the bank need not be taken from the tank-bed.

It is essential that all these works should be easily accessible to inspecting officers and not approached, for instance, by a long stretch of *katcha* road through black-soil with several nallas liable to flooding. Although, therefore, there was somewhat wider scope for the profitable employment of relief labour on Public Works during the rains than was anticipated in Famine Circular No. F-49, dated the 7th May 1900, the cost of providing suitable hutting accommodation was, as pointed out in that Circular, very heavy and wasteful, and the exposure and discomforts on the works were great. The orders contained in the Circular regarding the contraction of Public Works were promptly but gradually given effect to. Of the 214 camps opened in all, there were 189 open in May 1900. The number proposed to be retained during the rains was 50; the camps actually in operation were—June, 168; July, 123; August, 79; and September, 43. The more distant works were closed first and the area of operation was gradually contracted until only a few remained close to the head-quarters of the Sub-Divisional Officers and within comparatively easy reach of all Inspecting Officers.

38. Every endeavour was made from the outset to obviate, as far as practicable, the multiplication of roads of more or less doubtful utility and the construction generally of any works which would add unnecessarily to the future burdens of the Province. The desirability of undertaking railway work for purposes of relief was urged in Central Provinces letter No. 63-7259,

Railways. dated the 7th September 1899, to the Government of India, and sanction was obtained for the inclusion of earthwork and ballast collection on the Satpura Railway in the Provincial programme of relief-works. The Bilaspur-Mungeli, Khandwa-Akola-Basim and Raipur-Vizianagram lines were subsequently added to the programme (February and March 1900). Substantial progress has been made on the Satpura Railway and the Bilaspur-Mungeli Railway (*vide* District summaries), and it is hoped that the time of their eventual completion is now within measurable distance. The co-operation of the Railways in these Provinces was also invited at an early stage, and besides the collection of ballast for the use of the Great Indian Peninsula, East Indian and Bengal-Nagpur Railways, several important minor railway works have been carried out with the sanction of the Government of India. The Great Indian Peninsula Railway has been widened for a double line between Khandwa and Itarsi; work was undertaken on the new approach from the Hoshangabad Railway Station to the Nerbudda bridge on the Indian Midland Railway, and considerable improvements have been effected on the Raipur-Dhamtari Feeder Line. The possibility of employing relief labour on the construction of irrigation reservoirs was also considered. The services of an Engineer officer of experience in irrigation projects were placed at the disposal of this Administration early in February 1900, and several useful schemes were quickly worked out and some actually constructed in the Chhattisgarh Division. The investigation of irrigation schemes is still in progress, and in the course of a few years a comprehensive programme of all possible projects in the Central Provinces will be drawn up ready for execution when required to afford employment for relief labour, and some of them will, it is hoped, be also carried out as a protective measure.

Irrigation works.

Several water-supply schemes in the Province have, moreover, been considerably improved by famine labour. An important feeder-channel into the Mohgat Reservoir at Khandwa, 5 miles long, has been constructed; the storage capacities of the Ambajheri Reservoir at Nagpur and Baberia at Seoni have been enlarged, and improvements have been effected on the Telinkheri and Jumma tanks at Nagpur, and the water-works of Hinganghat and Raipur. Various other miscellaneous works and improvements have been carried out throughout the Province. Land has been cleared, and a small colony formed in Nimar. *Kāns* eradication has been done to some extent in the Narsinghpur and Hoshangabad districts, and agricultural improvements have been otherwise effected in several other districts, especially Betul, where boulders were removed from the fields on a considerable scale. A telegraph line was also laid in the Betul District from Betul to Multai. A large number of village tanks, partly for purposes of irrigation and partly for water-supply, have also been constructed.

Quantity and description of work done.

39. The quantity and description of works carried out are as follows:—

Railways—

Total earthwork	...	...	594·12 lakhs of cubic feet.
„ ballast collection	...	...	60·27 „ „

Irrigation works—

Total number	...	...	15
„ earthwork	...	...	337·54 lakhs of cubic feet.
„ stone-pitching	...	...	4·62 „ „
„ masonry	...	...	0·14 „ „

Water-supply—

Total earthwork	...	...	93'35 lakhs of cubic feet.
„ stone pitching	...	...	0'33 „ „
„ masonry	...	...	0'04 „ „

Road works—

New roads (total length)	...	...	783 miles.
Raised in class (total length)	...	...	1,044 „
Roads, repaired (do. )	...	...	409 „
Total earthwork	...	...	2,719'21 lakhs of cubic feet.
„ metal collection	...	...	592'60 „ „
„ moorum „	...	...	775'17 „ „
„ consolidation	...	...	309'95 „ „

Village tanks—

Total number	...	...	282
„ earthwork	...	...	1,434'89 lakhs of cubic feet.

The extent to which relief labour was employed on the various classes of work is exhibited below:—

Description of work.				Total number of day-units relieved.	Total expenditure* on works only.	Total value of work done at normal rates.
				No.	Rs.	Rs.
Railways	...	...	...	13,039,765	9,61,651	5,46,223
Irrigation works	...	...	...	7,179,443	5,27,651	2,84,159
Water-supply	...	...	...	1,796,942	1,35,314	1,34,055
Road works	...	...	...	139,335,704	1,08,83,044	49,82,424
Village tanks	...	...	...	17,400,358	12,71,685	8,03,578
Other works—Miscellaneous	...	...	...	1,157,417	96,860	61,125
Total				179,909,629	1,38,76,205	68,11,564

* This includes "Works" only, viz. :—(1) Wages, (2) Gratuitous, (3) Items of work done by contract.

40. In spite of all efforts in other directions, road-work has after all been the chief resource. Every endeavour was made, however, to confine expenditure to works of distinct and permanent utility as far as practicable. Large quantities of metal and moorum have been collected on existing Classes I and II roads which will greatly reduce the cost of future maintenance for several years to come. New roads have been constructed and old ones improved where their usefulness was the least doubtful. Besides the construction of ordinary works on roads, railways, tanks, &c., profitable employment was found for relief labour in various other ways. The workers were largely employed on the erection of relief-camps, carrying water for their own use from distant sources of supply in carts and *banghis*, making baskets, collecting firewood for the kitchens and hutting materials for themselves, and repairing tools, &c. The exclusive employment of famine labour in all operations connected with relief, indeed, formed a marked feature of the present famine. With the exception of the erection of some camps and collection of boulders for metal breaking in the very early stages, practically all work was executed by famine labour.

41. The total expenditure on Public Works Department works amounted to 192'60 lakhs of rupees which was distributed as follows:—

Direct Relief—

			Rs.
1. Wages	...	...	120'58
2. Gratuitous	...	...	9'76
			<hr/>
	Total	...	130'34
			<hr/>

Incidental Charges—

3. Items of work done by contract	...	...	8'42
4. Special establishment	...	...	13'53
5. Other items	...	...	26'73
6. Tools and plant	...	...	13'58
			<hr/>
	Total	...	62'26
			<hr/>

GRAND TOTAL ... 192'60

"Wages" includes wages of relief-workers only; and "Gratuitous" includes all expenditure connected with feeding in kitchens and cash doles paid to the working mother for an infant-in-arms. "Special establishment" includes all pay and allowances of all special establishment, whether on the works or in offices, specially created for famine works, but excludes such as was paid on Gang Register of relief-workers, and any additions to the clerical and accounts establishment of an existing office, the cost of such additions having been debited to the ordinary head—*vide* Public Works Department Code, volume I, chapter IX, paragraph 104, note to sub-clause (ii) of clause VI. The "Special establishment" also includes (i) salary and deputation allowance (if any) of men transferred from the Civil Department; (ii) deputation allowance of Military Officers and subordinates transferred from the Military Department and other extra charges incurred in that department in consequence of their absence; (iii) travelling allowance, and (iv) contingencies. "Items of work done by contract" include only payments to contractors for mile-stones, collection of rubble for metal breaking (when executed by contract), and other similar work. "Tools and Plant" include besides tools, such as picks, phouras, hammers, crowbars, &c., such articles as kitchen utensils, cash chests, camp furniture, &c.,—in fact all articles of a non-perishable nature which could be brought on to stock on the closure of works. "Other items" include all expenditure that cannot be classed under the above heads, such as hutting, conservancy, water-supply, medical, &c.; also baskets, handles to tools, and other similar perishable articles. "Wages," "Gratuitous" and "Items of work by contract" were debited to estimates for works; for each of the remaining heads of expenditure there were special estimates.

Statistical tests of success with regard to economy.

42. The recognised statistical tests of the success of Public Works Department operations with regard to economy are:—

- (a) the expenditure on relief and the incidence per unit relieved;
- (b) the expenditure on special establishments and miscellaneous charges;
- (c) the ratio of famine to the normal rates of work; and
- (d) the extent to which the works executed are of permanent utility.

43. The expenditure on relief and the incidence per unit relieved under each prescribed mode of relief may be considered under the following heads :—

- (1) wages of workers;
- (2) cost of gratuitous relief; and
- (3) general incidence of cost of relief per 1,000 units relieved.

The wages earned by workers have already been fully discussed. The following table shows the wage-rates per male unit (*reduced Class I*) on the lines adopted in paragraph 360 of the Famine Commission Report of 1898 :—

District.	ACTUAL WAGES EARNED PER REDUCED CLASS I UNIT.		ALLOWANCE PERMISSIBLE UNDER GENERAL ORDER PER CLASS I UNIT.		Average wage-basis, seers per rupee.	Wage-rate per Class I unit on a basis of 10 seers per rupee.	Remarks.
	Pice.	Purchasing power of wage earned.	Pice.	Chittaks.			
		Chittaks.				Pice	
Jubbulpore ...	5'0	15'0	6	19	13'5	6'7	For comparison see paragraph 360 of the Report of the Famine Commission of 1898.
Seoni ...	6'0	15'8	6	19	12'0	7'2	
Mandla ...	7'0	18'4	7	19	10'5	7'3	
Saugor ...	5'9	16'2	6	19	12'0	7'1	
Nagpur ...	6'3	15'7	7	19	10'5	6'6	
Wardha ...	6'4	16'8	7	19	11'5	7'4	
Chanda ...	6'7	15'9	8	19	10'0	6'7	
Bhandara ...	6'1	14'5	7	19	10'5	6'4	
Balaghat ...	6'5	15'4	7	19	10'5	6'8	
Hoshangabad ...	5'9	14'7	7	19	11'0	6'5	
Betul ...	7'0	15'7	8	19	9'5	6'6	
Nimar ...	5'9	14'0	8	19	10'0	5'9	
Narsinghpur ...	6'0	15'0	6	19	12'0	7'2	
Chhindwara ...	6'5	15'4	7	19	11'0	7'1	
Raipur ...	6'2	16'3	7	19	11'5	7'1	
Bilaspur ...	6'2	16'2	7	19	11'5	7'1	
Sambalpur ...	7'3	18'2	8	19	10'0	7'3	
Averages ..	6'3	15'8	7	19	11'0*	6'9	

* Average market price of the cheapest grain was 10 seers per rupee.

The average results compare as follows with those of the famine of 1896-97 :—

Particulars.	Results of Central Provinces, 1896-97.	Results of all India, 1896-97.	Results of Central Provinces, 1899-1900.
Wage-rate per male-unit in pice ...	8'36	7'76	6'30
Do. on a basis of 10 seers per rupee in pice.	6'68	7'76	6'90
Corresponding grain-wage per unit in chittaks.	16'50	19'50	17'25*

* Actual wage earned per male-unit (*i. e.*, reduced Class I) was 15'80 chittaks, the average market price of the cheapest grain being 10 seers per rupee.

44. The following statement showing the cost of gratuitous relief per reduced Class IV adult unit has been prepared on the same principles as the table of wages given in the preceding paragraph (*vide* paragraph 365 and Statement B at page 236 of the Famine Commission Report of 1898):—

District.	COST PER REDUCED CLASS IV ADULT UNIT.		ALLOWANCE FURNISHED UNDER GENERAL ORDER PER CLASS IV UNIT.		Average grain-rate in seers per rupee.	Cost per reduced Class IV unit on a basis of 10 seers per rupee.	Remarks.
	Pice.	Chittaks.	Pice.	Chittaks.			
Jubbulpore ..	3'2	9'6	4	12	12'0	3'8	(For comparison see paragraph 365 and Statement B at page 236 of the Report of the Famine Commission of 1898.
Seoni ...	4'0	12'0	4	12	10'5	5'1	
Saugor ...	5'6	15'4	4	12	11'0	6'2	
Nagpur ...	5'6	14'0	5	12	10'0	5'6	
Wardha ...	4'7	12'3	4	12	10'5	4'9	
Chanda ...	5'3	12'6	5	12	9'5	5'0	
Bhandara ...	4'8	11'4	5	12	9'5	4'6	
Balaghat ...	6'0	14'2	5	12	9'5	5'7	
Hoshangabad ..	4'9	12'2	4	12	10'0	4'9	
Betul ...	5'2	11'7	5	12	9'0	4'7	
Nimar ...	4'9	11'6	5	12	9'5	4'8	
Narsinghpur ...	4'4	11'0	4	12	10'0	4'4	
Chhindwara ...	5'9	14'0	4	12	9'5	5'6	
Raipur ...	6'1	16'0	4	12	10'5	6'4	
Bilaspur ...	5'6	14'7	4	12	10'5	5'9	
Sambalpur ..	6'3	15'8	5	12	10'0	6'3	
Averages ..	5'2	13'0	4	12	10'0	5'2	

The results of the several districts do not admit of a fair comparison as the conditions varied widely. The cost of gratuitous relief depended a great deal upon the general condition of the workers, the total numbers relieved at the kitchens, the economy practised by the kitchen officials and the proportion of children (Class V). The last was a very important factor. In the Jubbulpore Division, for instance, the cost was lowest in the Jubbulpore District where the proportion of children was highest (Class V : Class IV = 100 : 1 approximately) and was highest in Saugor where the ratio was least (Class V : Class IV = 10 : 1 approximately). Likewise in the Nerbudda Division (neglecting the Narsinghpur District where the operations lasted for a very short time), the cost of relief was least in Betul where the ratio of men to children was 1 : 40 against an average of 1 : 20 elsewhere in the Division. The cost reached its maximum in Sambalpur where the proportion of adults was highest (Class IV : Class V = 1 : 3 approximately), excluding from consideration the district of Raipur where the conditions were in a variety of ways exceptional. The average cost of gratuitous relief (reduced to its equivalent in grain) was somewhat in excess of the General Order allowance chiefly on account of the liberal manner in which the invalids, nursing mothers and sickly children and infants were treated. In Chhattisgarh all working children were fed in the kitchen instead of receiving cash relief from September onwards. In this Division, too, the provision of special diet to the crowds of nursing mothers, who were fed at kitchens, and to weakly children was on a lavish scale. The average results compare as follows with those of the famine of 1896-97 :—

Particulars.	Results of Central Provinces, 1896-97.*	Results of all India, 1896-97.†	Results of Central Provinces, 1899-1900.
Cost per adult unit in pice ...	6'08	4'56	5'20
Cost on a grain-basis of 10 seers per rupee ...	4'88	4'56	5'20
Corresponding grain-wage per unit in chittaks ...	12'00	11'50	13'00

* Dependants only.

† All kinds, including dependants, home-relief, poor-houses, kitchens, &c.

45. The following table shows (1) the actual rate of expenditure incurred per 1,000 day-units relieved in each district, and (2) what this rate of expenditure would have been under each head had the wage-basis and market price of grain been uniform throughout. The wages varied in accordance with the actual wage-basis,

General incidence of cost of relief per 1,000 units relieved.

and the gratuitous charges in accordance with the prevailing market rate; both have in the subjoined table been reduced to a uniform basis of 10 seers to the rupee:—

District.	ACTUAL COST.		Wage-basis.	Average market price of the cheapest grain.	REDUCED TO UNIFORM WAGE-BASIS OF 10 SEERS.							Grand Total.
	Direct relief.	Total expenditure including all charges.			Direct relief reduced to uniform wage-basis.	Actual.						
						Items of work done by contract.	Special establishment.	Other items.	Tools and Plant.	Total incidental charges.		
	Rs.	Rs.	Seers.	Seers	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	
Jubbulpore	58'40	83'40	13½	12	78'68	2'00	8'00	10'00	5'00	25'00	103'68	
Seoni	72'00	97'00	12	10½	85'95	2'00	10'00	7'00	6'00	25'00	110'95	
Mandla	90'20	116'46	10½	8	94'71	5'53	4'97	7'41	8'35	26'26	120'97	
Saugor	66'00	102'00	12	11	78'80	1'00	11'00	17'00	7'00	36'00	114'80	
Damoh	...	...	...	...	...	...	...	...	...	...	...
Nagpur	73'40	127'20	10½	10	76'87	10'50	8'10	26'50	8'70	53'80	130'67	
Wardha	73'33	113'15	11½	10½	83'72	5'16	4'92	21'91	7'83	39'82	123'54	
Chanda	77'98	114'32	10	9½	77'67	3'64	6'37	18'51	7'82	36'34	114'01	
Bhandara	71'06	87'62	10½	9½	74'20	2'10	5'90	3'35	5'21	16'56	90'76	
Balaghat	74'54	91'86	10½	9½	77'95	3'10	8'08	3'07	3'07	17'32	95'27	
Hoshangabad	64'80	117'90	11	10	70'84	10'40	10'90	22'00	9'80	53'10	123'94	
Betul	78'69	109'77	9½	9	74'55	0'61	6'42	12'81	11'24	31'08	105'63	
Nimar	61'83	112'30	10	9½	61'47	3'10	12'68	24'40	10'29	50'47	111'94	
Narsinghpur	70'77	277'67	12	10	84'43	13'45	67'93	92'59	32'93	206'90	291'33	
Chhindwara	74'50	97'94	11	9½	81'13	2'45	5'63	11'31	4'05	23'44	104'57	
Raipur	72'35	111'25	11½	10½	82'60	7'74	6'86	15'93	8'37	38'90	121'50	
Bilaspur	71'58	109'63	11½	10½	81'49	3'67	9'11	17'40	7'87	38'05	119'54	
Sambalpur	86'36	155'79	10	10	86'36	12'62	13'41	33'05	10'35	69'43	155'79	
I. (a) Average for Central Provinces 1899-1900.	72'44	107'05	11	10	79'14	4'68	7'52	14'86	7'55	34'61	113'75	
(b) Do., 1896-97...	89'64	114'76	8	...	71'71		25'12			25'12	96'83	
II. (a) Percentage of cost under different heads, 1899-1900.	67'68	100	...	...	69'57	4'11	6'61	13'07	6'64	30'43	100
(b) Do., 1896-97...	78'11	100	...	...	74'06		25'94			25'94	100

46. The total cost per 1,000 units was highest in Narsinghpur, where the works were closed after a brief existence, and an adequate return could not, therefore, be obtained for the large outlay on preparatory measures. The cost in Sambalpur was also very high because (1) up to March 1900 only the able-bodied were on the works who earned proportionately higher wages; (2) the incidental charges for the very few works opened in this district were comparatively high, and (3) the constant fluctuation of numbers in consequence of the presence or absence in a greater or less degree of cholera greatly impeded the progress of works and was detrimental to economical management. The rates of expenditure in other districts varied with the degree of distress, the acuteness of the water-failure and the general condition of the workers. Economy was practised in all districts as far as practicable under the stress of a variety of adverse circumstances; and on the whole the expenditure of Rs. 113'75 per 1,000 on the supposed basis of 10 seers, or about 9 units per rupee cannot be regarded as otherwise than moderate. The cost of relief has been higher than in the last famine, as the figures at the foot of the above table will show. This is the outcome of the efforts made from the outset to keep well ahead of distress and to maintain an abundant and pure supply of water throughout the operations. And the

result was to stave off—or promptly suppress when they did break out—epidemics of cholera and other diseases, to maintain the workers of all classes generally in excellent condition, to save a great deal of infant life, and to not only keep down the death-rate on the works to 21·6 per *mille* per annum, *i. e.*, below that of the Province generally, which was 59·5 during the present famine, but even below the average of 33·3 for the decennial period ending 1894.

47. The following table compares the actual cost of the famine with the basis adopted by the Famine Commission of 1898 for estimating the cost of future famine relief (*vide* paragraph 380 of their Report):—

Heads of Expenditure.	Cost per 1,000 units on a basis of 10 seers per rupee during the famine of 1899-1900.	Cost per 1,000 units on a basis of 10 seers per rupee adopted by the Famine Commission of 1898 for estimating cost of future famines.
	Rs.	Rs.
Direct relief	79·14	80·00
<i>Incidental Charges—</i>		
Special Establishment	7·52	6·00
Items of work done by contract	4·68	8·00
Other items	14·86	
Tools and Plant	7·55	
Total incidental charges	34·61	14·00
GRAND TOTAL	113·75	94·00

While the cost of direct relief was below the standard adopted by the Famine Commission, the incidental charges were considerably higher. The "special establishment," which included deputation allowances, travelling allowances and contingent expenses, cost 25 per cent. more; and the "Tools and plant" alone approached very nearly the cost allowed for all other incidental charges. The "Tools and plant" included not only tools proper such as picks, phorahs, &c., but kitchen utensils, cash chests, camp furniture, &c., and also a large number of iron water-barrels for carting and storing water. The generally high rate of incidental charges follows from the heavy expenditure on hutting, water-supply, hospital requirements, &c. Numerous wells were dug, chains of temporary reservoirs were constructed across streams, and other special measures were adopted which largely contributed to the cost of water-supply, which in a year of such extreme drought, when nearly all the ordinary sources of supply failed, was bound to be very heavy, and which by itself accounts for a very large proportion of the incidental charges.

48. The ratio of actual expenditure to value of work done in each district at normal rates is given below. Columns 2 to 4 give the actual ratios, and columns 7 to 9 the same reduced to a 10 seer grain-basis. Columns 2 and 7 indicate the result of direct expenditure on works, *viz.*, the labour employed and the materials purchased from contractors (*e. g.*, boulders for metal collection, mile-stones, &c.); and columns 3 and 8, the result of expenditure actually charged to works, *viz.*, wages, gratuitous charges

and items of work done by contract. The ratios, including expenditure on all heads, are shown in columns 4 and 9:—

District.	RATIO OF FAMINE TO ORDINARY RATES.			Wage-basis, in seers.	Average market price of the cheapest grain in seers.	RATIO OF FAMINE TO ORDINARY RATES REDUCED TO 10 SEER WAGE-BASIS.		
	Works including only wages and items of work done by contract.	Works including wages, gratuitous and items of work done by contract.	Total expenditure including works and all incidental charges.			Works including only wages (reduced to a uniform wage-basis of 10 seers) and items of work done by contract.	Works including wages and items of work by contract as in column 7 and gratuitous reduced to 10 seer grain rate.	Total expenditure including works and all incidental charges.
1	2	3	4	5	6	7	8	9
Jubbulpore ...	1'35	1'38	1'90	13'5	12 0	1'81	1'84	2'37
Seoni ...	1'26	1'31	1'73	12	10'5	1'51	1'56	1'98
Mandla ...	0'94	0'94	1'14	10'5	8 0	1'15	1'15	1'35
Saugor ...	1'43	1'52	2'30	12	11'0	1'71	1'81	2'59
Damoh ...	...	...	...	...	...	...	...	...
Nagpur ...	1'57	1'64	2'50	10'5	10 0	1'64	1'72	2'57
Wardha ...	1'87	2'03	2'93	11'5	10'5	2'13	2'30	3'19
Chanda ...	1'89	2'04	2'86	10	9'5	1'89	2'03	2'85
Bhandara ...	2'35	2'48	3'97	10'5	9'5	2'46	2'58	3'09
Balaghat ...	2'17	2'26	2 67	10'5	9'5	2'27	2 36	2'77
Hoshangabad ...	2'22	2'35	3'69	11	10'0	2'41	2'54	3'88
Betul ...	1'82	1'91	2'65	9'5	9 0	1'73	1'82	2'55
Nimar ...	1'83	2'05	3'55	10	9'5	1'83	2'04	3'54
Narsinghpur ...	1'10	1'13	3'72	12	10'0	1'28	1'31	3'91
Chhindwara ...	1'28	1'38	1'76	11	9'5	1'41	1'50	1'88
Raipur ...	2'39	2'58	3'58	11'5	10'5	2'71	2'91	3'91
Bilaspur ...	1'60	1'79	2'61	11'5	10'5	1'82	2'03	2'85
Sambalpur ...	1'56	1'82	2'86	10	10'0	1'56	1'82	2'86
Central Provinces ...	1'89	2'04	2 83	11	10'0	2'07	2'21	3'01

49. The varying conditions of relief which affected the general economy of operations have been already referred to under the head "Expenditure on relief." They also influenced the ratios of famine to the normal rates of work. To these causes must be added the form of work on which relief labour was employed; and the degree of accuracy with which the measurements were recorded in each district. Where labour was

concentrated on a well-defined and simple work such as tanks, railway embankment, &c., the cost was least; and where, on the other hand, crowds of workers were employed extensively on the carriage of moorum and metal, which even under the best management was bound to cost about five times the ordinary carting rates, the works were most expensive.

In the Jubbulpore Division generally the ratios are comparatively low, as there was no marked rush of workers and the general conditions of relief were favourable. In the Mandla District only the able-bodied were employed on the piece-work system, and works were therefore most economically conducted. Earthwork in tanks and roads formed the principal source of employment in the remaining districts of this Division, which largely accounts for the comparatively low ratios. The rates were high in the Nagpur and Nerbudda Divisions, where the distress was more acute and the general conditions were less favourable. The rate was highest in Narsinghpur on account of the early closure of the works. The effect of the large outlay on water-supply arrangements and of the extreme care with which the measurements were recorded by the Executive Engineer, is visible in the figures for Hoshangabad, Betul and Nimar. In most of the districts of these two Divisions labour was largely employed in the carriage of metal and moorum. Considering the exceptional difficulties with which the organization of works in the Chhattisgarh Division was beset, the results attained in that Division cannot be regarded as otherwise than satisfactory. The working rates reached their maximum in Raipur where the conditions were severest; those in Bilaspur and Sambalpur being well within the average. The fluctuation of numbers on account of the prevalence or suppression of cholera was the main cause of the high ratios in Sambalpur.

Comparison of ratios with those of the famine of 1896-97.

50. The general results of the famine of 1899-1900 compare as follows with the famine of 1896-97:—

Particulars.				Ratio based on wages only.	Ratio based on total expenditure on all heads.	Remarks.
Central Provinces during famine of 1899-1900 ...				1'77	2'83	* These are the accepted ratios, <i>vide</i> Table appended to paragraph 381 of Famine Commission Report, 1898.
Do.	do.	1896-1897 *	...	1'80	2'50	
N.-W. P. and Oudh	do.	do. *	...	2'00	2'80	
All India	do.	do. *	...	1'89	2'29	

The ratio based on the total expenditure, although higher than in the last famine in the Central Provinces, compares favourably with the results of the North-Western Provinces. It must be noted, however, that the total expenditure on all heads as given for the famine of 1896-97 included only half the cost of tools and plant, the difference between the total expenditure, *viz.*, 102'88 lakhs dealt with in the report on the famine of 1896-97, and the gross famine expenditure being taken as the value of tools and plant at the close of that famine. During the present famine a sum of 13'58 lakhs was expended on tools and plant. If, for purposes of comparison, half this sum is deducted from the total expenditure of 192'60 lakhs, which includes the full value of tools, for the present value of tools and plant still on hand, the total expenditure on all heads would then be 185'81 lakhs, and the ratio 2'72, which though still higher than that of the last famine in the Central Provinces would be lower than that of the North-Western Provinces. The ratio based on wages only bears a striking testimony to the economy practised in the management of works during the present famine. It is not only lower than the ratio during the last famine in the Central Provinces, but considerably below the average for all India during 1896-97. The peculiar significance of this ratio will be still clearer when it is examined side by side

with the ratio including items of work done by contract as given in the table in paragraph 48 :—

Ratio during present famine including wages only	...	1'77
Do. do. wages and items of work done by contract	...	1'89
Ratio during last famine including wages only	...	1'80

These figures prove not only how little was done during this famine by contract, but how much was executed by relief labour. The total ratio, including materials collected by contract, only slightly exceeded the ratio based on wages alone in the famine of 1897—when all rubble collection for metal breaking was separately carried out by contract.

Directly connected with the cost per day-unit relieved and ratios of famine to ordinary work, is the question of the number of day-units that any given work, estimated at normal rates, will provide for. From the table in paragraph 47 it will be seen that the cost per 1,000 units, for direct relief, that is, wages and gratuitous, was Rs. 79'14; for items of work done by contract, Rs. 4'68; or a total of Rs. 83'82 per 1,000 day-units, which is at the rate of one rupee for every 11'9 day-units. From the table in paragraph 48, column 8, the ratio of famine to ordinary rates based on the expenditure on direct relief, and items of work done by contract, and reduced to a 10 seer basis, is found to be 2'21. That is assuming a 10 seer wage-basis, for every rupee of an estimate for a work at normal rates, Rs. 2'21 will be spent, and for every rupee spent 11'9 day-units will be relieved. Therefore in calculating the number of day-units that can be provided for on any work, it is merely necessary to multiply the estimate for that work at normal rates by $(11'9 \times 2'21) = 26'3$. In the famine programmes of the Central Provinces the number of day-units per rupee of estimate is taken at 20 only, which leaves a margin of about 30 per cent.

51. In preparing the Famine Programme for each district care was taken to discriminate between all useful works and those the construction of which depended mainly on famine exigencies. The extent to which the works actually carried out are of permanent utility can, therefore, be indicated more clearly than was possible in the famine of 1896-97. Full credit may be taken for the Railway works exhibited in the following table, which have been measured with particular care and as far as possible by the Railway Engineers. Nearly $5\frac{1}{2}$ lakhs of rupees will be recoverable on account of these works :—

Statement showing expenditure incurred and value of work done on Railways.

Name of Railway and description of work done.				Total value at Public Works Department normal rates.	Total expenditure on works only.*	Remarks.
NEW CONSTRUCTION.				Rs.	Rs.	
Satpura Railway.						
Seoni District	...	...	...	21,659	36,541	* This includes only wages, gratuitous charges and items of work done by contract.
Bhandara District	...	...	...	16,145	24,168	
Balaghat District	...	...	...	1,63,896	2,87,943	
Chhindwara District	...	...	...	37,579	68,208	
Total				1,23,92,279	4,16,860	
Khandwa-Akola-Basim Railway.						
Nimar District	...	...	...	22,712	36,876	
Bilaspur-Mungeli Railway.						
Bilaspur District	...	...	...	90,038	1,48,826	

*Statement showing expenditure incurred and value of work done on
Railways.—(Concl'd.)*

Name of Railway and description of work done.	Total value at Public Works Department normal rates.	Total expenditure on works (Rs.).	Remarks.
	Rs.	Rs.	
<i>Raipur-Vishanagar Railway.</i>			
Raipur District	21,150	60,520	* This includes only wages, materials charges and interest on work done by contract.
MINOR WORKS, INCLUDING BALLAST COLLECTION.			
<i>Great Indian Peninsula Railway.</i>			
Widening for a double line, Hoshangabad District ...	17,625	67,502	
Do, Nimar District ...	14,003	26,324	
Supplying rubble, Chanda District ...	879	1,930	
Ballast collection, Wardha District ...	37,161	87,631	
Total ...	62,668	1,73,379	
<i>Indian Midland Railway.</i>			
Making new approach from the Hoshangabad Railway Station to the Nerbudda bridge, Hoshangabad District.	12,000	25,452	
<i>East Indian Railway.</i>			
Ballast collection, Jubbulpore District ...	6,126	6,118	
<i>Bengal-Nagpur Railway.</i>			
Ballast collection, Bilaspur District ...	79,747	41,716	
Do, Raipur District ...	3,691	12,312	
Total ...	83,438	54,028	
<i>Raipur-Dhamtari Freeder Railway</i>			
Earthwork and Ballast collection, Raipur District ...	8,732	18,557	
GRAND TOTAL ...	346,223	9,61,651	

Credit may also be fully taken for the irrigation works which are more or less complete, and for the completion of which steps have already been taken under the instructions of the Inspector-General of Irrigation Works in India :—

Districts in which irrigation works were undertaken.	Value of work done on irrigation works at normal rates.	Total expenditure on irrigation works, (viz., wages, gratuities and items of work done by contract).	Remarks.
	Rs.	Rs.	
Jubbulpore ...	15,690	17,858	Village tanks for irrigation—all completed. Minor irrigation works partially completed.
Raipur ...	2,38,406	4,10,878	
Bilaspur ...	30,063	98,915	
Total for Central Provinces ...	2,84,159	5,27,651	

The village tanks constructed and improved, the works carried out in connection with the water-supply schemes at Nagpur, Seoni Khandwa, Hinganghat and Raipur, as well as the miscellaneous works such as eradication of *kāns* and removal of boulders from fields, &c., are also all of distinct and permanent utility :—

Description of works.	Value of work done at normal rates.	Total expenditure incurred on works (<i>viz.</i> , wages, gratuitous and items of work done by contract).	Remarks.
	Rs.	Rs.	
Water-supply ...	1,34,055	1,35,314	Water-works at Nagpur, Seoni, Khandwa Hinganghat and Raipur.
Village tanks ...	8,03,578	12,71,685	
Other works—miscellaneous ..	61,125	96,860	<i>Kāns</i> eradication, removal of boulders, from fields, field-embankments, telegraph line, &c.
Total ...	9,98,758	15,03,859	

The value of work done on roads may be shown under two heads, *viz.*,
 Roads. (1) roads which had already been entered in the District Road schemes as desirable works, and for the construction of which funds would sooner or later have been found in the ordinary course, and (2) roads that had at any time been proposed but the construction of which was not contemplated except for purposes of famine relief :—

	Value of work done at normal rates.	Expenditure on works, <i>viz.</i> , wages, gratuitous and items of work done by contract.
	Rs.	Rs.
Class (1) of distinct utility ...	44,92,862	96,54,812
Class (2) of doubtful utility ...	4,89,562	12,28,232
Total ...	49,82,424	1,08,83,044

Even class (2) roads will, it is hoped, be eventually completed; but as their chances of completion are comparatively remote, approximately half the value may be credited to famine; bringing up the total value of classes (1) and (2) to Rs. 47,37,643.

Total effective value of work done.

52. The total effective value of work done may then be summed up as follows :—

Serial No.	Description of works.	Effective value of work done at normal rates.	Expenditure on works only.*	Total expenditure on all heads.	Remarks.
		Rs.	Rs.	Rs.	
1	Railways ...	5,46,223	9,61,651	...	* Includes only wages, gratuitous charges and items of work done by contract.
2	Irrigation works ...	2,84,159	5,27,651	..	
3	Water-supply ...	1,34,055	1,35,314	...	
4	Road works ...	47,37,643	1,08,83,044	...	† Expenditure on wages only = Rs. 1,20,57,880.
5	Village tanks ...	8,03,578	12,71,685	...	
6	Other works—miscellaneous ...	61,125	96,860	...	Expenditure on tools and plant = Rs. 13,58,461.
	Total ...	65,66,783	1,38,76,205	† 1,92,59,938	

Of this the work done on railways, valued at Rs. 5,46,000, will be recovered in course of time.

The total expenditure includes an outlay of over 13½ lakhs on tools and plant alone. Allowing, at the lowest computation, a proportion of one-third as representing the present market value of the tools, &c., the total effective value of works would approximately be Rs. 70,19,603, which may be regarded as a set-off to the State expenditure on relief. The real value to the State and to the Municipalities and village communities of the works executed by the Public Works Department during the famine may be closely put at 36 per cent. of the total expenditure on all accounts and 58 per cent. of expenditure actually incurred on wages alone, against 40 per cent. of the expenditure on wages which was the general result for all India in the last famine, *vide* paragraph 401 of the Famine Commission Report of 1898.

53. With the exception of a considerable number of temporary employés who turned out to be bad bargains and a very few permanent subordinates who failed to rise to the occasion, all members of the Public Works Department Staff, high or low, applied themselves to their respective tasks with the utmost energy and devotion. Each strove, in his own way to do his best under the most trying circumstances, regardless of exposure to weather and disease. No less than 36 died on duty, of whom 3 were Europeans (Captain Fisher, Sub-Conductor Naylor and Corporal Riddock) and 33 Native subordinates and camp officials. The number of those who suffered without actually succumbing and have sustained more or less permanent injuries, bodily or mental, must be large though unknown. Foremost among these was Mr. E. Penny, Superintending Engineer, to whose exertions in the earlier stages the success of the operations is so largely due. He was struck down in the midst of his arduous duties and was invalided home (to quote His Excellency the Viceroy's words) "shattered in health and paralysed in his limbs."

54. Where so many temporary subordinates, clerks, &c., were employed on the extensive relief operations, where thousands of rupees were disbursed daily, it was only to be expected that some would be tempted by the openings for peculation that presented themselves in the course of their duties.

There were altogether 52 prosecutions:—

Divisional Office Staff	...	2
Officers-in-charge	...	3
Upper Subordinate	...	1
Lower „	...	1
Work Agents	...	6
Gang Muharrirs	...	21
Hospital Assistant	...	1
Clerks	...	8
Mates and other menials	...	9
Total	...	52

Of these 18 were convicted (of whom 5 were subsequently acquitted on appeal), 23 were discharged for want of sufficient proof, 2 absconded, and the remainder are under trial. Of the dishonesty of many more there was little doubt; but the time and trouble that would have been involved in their prosecution in a Court of Law could not be devoted to their adequate punishment. They were simply dismissed when sufficient proof warranted such action. At the same time, it cannot possibly be denied that the officials employed did as a rule discharge their duties honestly. Their remuneration was adequate; inspection was frequent and careful; and the spirit that animated men was generally excellent.

NOTE BY THE SUPERINTENDING ENGINEER ON THE SERVICES OF PUBLIC WORKS DEPARTMENT OFFICERS AND SUBORDINATES DURING THE FAMINE OF 1899-1900.

Paragraph 11 of the Minute, dated the 27th February 1901, by the Officiating Chief Commissioner, Central Provinces, relating to the services of Public Works officers during the famine of 1899-1900, is extracted below for facility of reference :—

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On the officers of the Public Works Department was laid the burden of organizing and carrying out the principal relief-works throughout the province. Mr. E. Penny, C. I. E., whose capacity and devotion to duty rendered him a most valuable co-adjutor, was struck down in December 1899. He was succeeded as Superintending Engineer by Mr. G. J. Perram, who also rendered valuable service. The Hon'ble L. M. St. Clair, both as Superintendent of Works and as Superintending Engineer, has done most efficient work. He thoroughly understands the details of famine relief, and is full of energy and vigour. I am specially indebted to him for his good service in Chhattisgarh. These officers were well served by their subordinates: few failed them. Mr. J. B. Leventhorpe, Mr. R. Mitra and Captain Blakeway, Executive Engineers, Mr. G. W. Neville, Mr. P. C. Lall and Mr. N. N. Mukerji, Assistant Engineers, and Sergeant Desmond, are among the many who have done excellent work.

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2. Among the Executive Engineers in charge of Divisions, Mr. G. G. White up to the end of April and thereafter Captain L. W. S. Oldham, Executive Engineers. in the Jubbulpore Division; Mr. R. Mitra up to the middle of December and after that date Mr. J. B. Leventhorpe in the Hoshangabad Division; Mr. F. W. M. Scott first in the Narsinghpur Division and from April onwards in the Nagpur Division, and Captain J. P. Blakeway in the Bhandara Division throughout, were all conspicuous for unsparing energy in organizing and inspecting relief-works and for the excellence of their work. Mr. W. B. Starky in the Chhattisgarh Feudatory States did excellent service.

3. Three officers of the Military Works Department were sent by the Government of India to the assistance of the Central Provinces, Public Works Department. Their services were of great value to the Administration at a time when officers with technical engineering knowledge were urgently required. Of these Major H. Appleton, R. E., who was in charge of the Eastern Division from December 1899 to the middle of August 1900, was untiring in his energy and devotion to duty. The districts of Raipur and Bilaspur of which he had charge were by far the most severely afflicted, and the burden on his shoulders was more than any single man could successfully bear, and Major Appleton deserves great praise for the way in which he grappled with the work. Captain W. F. Tilley, who was in charge of arrangements under the Executive Engineer, Hoshangabad Division, up to the middle of August, and subsequently in independent charge of the Eastern Division, where he had the closing up of relief-works, and the very heavy work of settling accounts and compiling returns, rendered very valuable service. Captain R. E. Greer in charge of the Narsinghpur Division from the end of March did useful work.

4. Rao Sahib D. S. Sathaye, Executive Engineer, as Assistant to the Executive Engineer, Nagpur Division, and Rao Sahib Ishwari Prasad, first as Famine Works Superintendent and latterly as Assistant to the Executive Engineer, Hoshangabad Division, did good work.

5. Mr. H. H. Jellett, District Engineer, whose services were lent by the Bengal-Nagpur Railway Company, did useful work in setting out, and in part re-aligning, the Satpura Railway for famine relief-work. Mr. C. V. N. Shortland, District Engineer, whose services were obtained from the same Railway, did very good service in the Bilaspur

District in the alignment and in the supervision of the work on the Bilaspur-Mungeli Railway. He subsequently rendered very efficient service as Sub-Divisional Officer in closing up the relief-works in the Bilaspur District.

6. Among the Assistant Engineers, Mr. P. C. Lall, in Raipur, Lieutenant H. deL. Pollard-Lowsley, R. E., in Bhandara, and Rai Sahib N. N. Mukerji in Chanda, rendered most valuable service throughout the famine; the work of all three being of particular excellence. Messrs. B. N. Sarkar, G. A. Phear, and H. B. Learoyd, worked zealously and well. Mr. G. Wright-Neville, Assistant Engineer, was placed in charge of all Public Works famine relief-works in the Saugor District directly under the orders of the Superintending Engineer, and managed this responsible charge very efficiently. Mr. C. H. Dracott, a Temporary Engineer, whose services were obtained from the Khandwa-Akola-Basim Railway, worked hard and did good service in the Eastern Division where assistance was much required.

Both the Honorary Assistant Engineers of the Central Provinces, *viz.*, Mr. F. Meehan in the Nagpur Division, where besides the direct management of several large relief-works in the Nagpur District, he had the equipment of the whole of the charges in the Nagpur Division to look after; and Mr. W. J. McQuillen in the Khandwa Sub-Division, worked successfully and without sparing themselves.

7. Turning now to the Upper Subordinates, Mr. P. J. FitzPatrick, Sub-Engineer in Jubbulpore, and Supervisors Chandi Pershad in Seoni, J. N. Mitra in Wardha, Sergeant Desmond in Chhindwara, and Overseer W. A. Boemel in Betul, distinguished themselves by their zeal and the efficiency of their arrangements. Their services were highly commendable as were also those of Supervisor C. Willford in Raipur till his health broke down in April. Supervisors Ashutosh Banerji in Sambalpur, Harcharan Dass in Chanda, Purshottam Razu in Nagpur, and Overseer Karam Chand in Balaghat, did excellent work, while Conductor W. J. Singleton, Supervisor in Saugor, and Overseer F. A. Hashman in Bilaspur, rendered efficient service.

8. The following lower subordinates while in charge of sub-divisions one and all did good work:—C. R. Damodhar Moodliar (Umrer), Govind Gopal Wazilwar (Mul), Dowlat Ram (Burhanpur), Ramlakhan Lall (Hurrai), Ralla Ram (Multai) and Mahomed Ishmail (Dindori). The work of the last two was of particular excellence.

9. In the disposal of the heavy work of direction in the Public Works Secretariat Mr. R. Mitra, Under Secretary in the Public Works Department, has given able and zealous help. His good work has greatly contributed to the satisfactory management of famine relief operations. Very high praise is due to him for the way in which he has collected, compiled and brought into suitable form the materials for this report.

10. The assistance given by Mr. V. C. French, Examiner, Public Works Accounts, was most useful in securing good arrangements for the heavy work of preparing and compiling the accounts of the famine works.

11. And lastly much credit is due to Mr. C. Bailey, the Superintendent of the Public Works Secretariat, and Mr. Purshottam Razu, the Head of the Famine Section, and the staff of clerks working under them, who may be said to have been for twelve months kept at continuous high pressure and who have met all calls on them most cheerfully. Holidays were freely foregone, and work out of hours performed without a murmur. The same may be said generally of the clerical staff of all the Divisional and Sub-Divisional Offices throughout the Province.

12. A very large number of officers and subordinates were deputed from other departments and were engaged from outside to assist the Public Works Department permanent staff in various capacities. Special reports on their services have already been sent to their Commanding Officers in the case of Staff Corps

Officers and to the heads of their departments in the case of other Government officials, while certificates, fully acknowledging their services, have been given to all temporary employés who deserved well of the Administration.

Famine Works Superintendents. 13. The work of the following, employed as Famine Works Superintendents, deserves special notice :—

Major H. Coape-Smith, 11th Bombay Lancers (Raipur).

Captain R. C. Lye, 23rd Regiment, Punjab Infantry (Raipur).

„ A. H. D. Creagh, 21st Regiment, Bombay Infantry (Hoshangabad)

„ H. P. Ainslie, 3rd Madras Infantry (Nimar).

„ B. J. Humfrey, 1st Lancers, Hyderabad Contingent (Chhindwara).

„ R. C. Coles, 37th Dogras (Bilaspur).

„ W. B. Douglas, 8th Rajputs (Jubbulpore).

Lieutenant J. A. Bliss, 21st Madras Pioneers (Bhandara).

„ W. B. Holbrooke, 24th Regiment, Bombay Infantry (Betul).

„ G. S. Palmer, 5th Infantry, Hyderabad Contingent (Balaghat).

„ L. H. R. Ames, 3rd Madras Lancers (Wardha).

Mr. George R. Duncan, Government Pensioner (Chanda and Wardha).

„ T. W. dela Riviere Catania, North-Western Provinces and Oudh Police (Bilaspur).

„ H. C. Roussac, Postal Department (Bhandara).

„ J. G. Bell, Superintendent, Calcutta Police (Raipur).

„ T. English, Central Provinces Police (Chanda).

„ Thomas Skone (Raipur).

„ J. J. Brebner (Raipur).

„ W. Cecil Morris (Chanda).

„ W. J. Knolles (Nagpur, Wardha and Betul).

„ F. D. Bellew (Bilaspur).

Temporary Engineers and Upper Subordinates.

14. The following Temporary Engineers and Upper Subordinates did excellent work and also deserve special notice :—

Temporary Engineers—

Mr. S. N. Bhaduri.

Babu Keshetra Mohan Ghose.

„ Chandra Kumar Sarkar.

Mr. G. C. Parker.

„ K. H. Datey.

„ A. E. Hobbs.

Temporary Upper Subordinates—

Corpl. W. J. Brown, Overseer, Military Works Department.

Mr. E. Smith.

„ V. B. Datey.

„ C. Anthony.

„ B. K. Narainswamy.

Babu Naraindass.

Mr. Niranjan Chatterjee.

The last-named, after doing very good work throughout the famine, unfortunately died of fever at his post in the Chanda District at the end of September.

NAGPUR:

L. M. ST. CLAIR,

The 1st March 1901. }

Superintending Engineer.

JUBBULPORE CIVIL DIVISION.

JUBBULPORE DISTRICT.

Relief Operations under the Public Works Department from November 1899 to October 1900.

In Jubbulpore it was not considered necessary to open large relief-works under this Department until the beginning of November. Two relief camps were opened in quick succession in November and three more by the third week of January, when the daily attendance rose to a maximum of 24,000. It was not until about the last week of July that the workers commenced returning to their villages in large numbers. Two camps were then immediately closed and the last camp (Panagarh No. 3) ceased to exist on the 12th October 1900.

2. Five charges in all were opened in this district, the average and maximum distance from the furthest affected village to any camp being 4 and 22 miles respectively. The daily attendance per charge averaged 2,900 or one out of every 40 of the affected population within the area served, the maximum being about 7,500 or one out of every 12. The average attendance for the whole district was a little under 11,000; the maximum being upwards of 24,000 in January. Labour was chiefly employed on roads and village tanks, and also to some extent on the construction of a few small irrigation reservoirs and the collection of ballast for the East Indian Railway. Altogether 3,585 million day-units were relieved on the Public Works, of whom the men, women and children were respectively 1,108, 1,772 and 0,706. A sum of 2,11 lakhs of rupees was expended on direct relief, the total expenditure including incidental charges amounting to 2,99 lakhs.

3. The extent to which relief was given on the works month by month is exhibited in the subjoined table:—

Month.	Number of charges.	Average daily attendance.	Maximum daily attendance.	Proportion of men, women and children.	PROPORTION OF WORKERS AND DEPENDANTS.			PERCENTAGE OF WORKERS AND DEPENDANTS OVER AFFECTED POPULATION.			
					Inter-mediate.	Task.	Gratui-tous.	Inter-mediate.	Task.	Gratui-tous.	Total.
October 1899 ...	...	...	...	Men 31 Women 50 Children 19	...	...	...	...	...	...	...
November " ...	2	5,751	9,941		82	13	5	0.63	0.10	0.04	0.77
December " ...	3	12,209	14,653		83	10	7	1.36	0.16	0.11	1.63
January 1900 ...	5	19,994	24,277		89	3	8	3.95	0.13	0.36	4.44
February " ...	5	12,375	21,769		88	3	9	2.42	0.08	0.25	2.75
March " ...	5	12,835	18,608		85	6	9	2.42	0.17	0.26	2.85
April " ...	5	13,334	16,891		81	10	9	2.40	0.30	0.26	2.96
May " ...	5	11,520	14,196		78	12	10	2.00	0.30	0.26	2.56
June " ...	5	13,735	16,316		88	1	11	2.69	0.03	0.33	3.05
July " ...	4	12,716	17,290		90.3	0.1	9.6	2.55	0.01	0.27	2.83
August " ...	2	6,357	9,254		98	...	2	0.83	...	0.02	0.85
September " ...	1	2,813	4,016		96	3	1	0.37	0.01	...	0.38
October " ...	1	1,021	1,211		97	3	...	1.10	0.03	...	1.13
	5	10,840	24,277	...	87	5	8	1.64	0.10	0.15	1.89

4. No special difficulties were encountered in organising works in this district. An influx of immigrants was feared and the necessary preparations were made when the Bohribun Camp (No. 2) was shifted to Salaia on the border of the district; but it was prevented by an outbreak of cholera. The proportion of women was unduly large, often double the number of men, but this difficulty was overcome by organising special carriers' gangs. The system of carrying metal found most suitable was the same as that described in the report on the Seoni District, *viz.*, that of long leads.

System of work, dependants,
tasks, &c.

5. The average proportion of workers under the intermediate and task-work systems and non-workers was as follows :—

Workers—

Intermediate	...	...	...	87
Task-work	...	...	...	5
Non-workers	...	...	...	8
			Total	100

The percentage of dependants rose with the increase in numbers from 5 in November to 9 in February, after which it remained fairly stationary until July. The drop in numbers at the end of July occasioned a corresponding fall in the proportion of the non-workers, which in some measure supports the theory that the proportion of dependants varies directly as the total numbers on relief (*vide* paragraph 6 of the report on Saugor District).

The tasks in force were as follows :—

Earthwork	...	...	...	80 cubic feet.
Metal breaking—				
Hard basalt	...	..	...	4½ cubic feet.
Soft metal	...	...	...	6¾ "

Class I workers in camp No. 5 (Slemanabad) were employed in quarrying, only Classes II and III being engaged in metal-breaking with tasks of 3 and 1½ cubic feet (basalt) respectively. The workers on the whole performed a fair proportion of the tasks assigned to them.

6. The workers were maintained in good condition throughout. There were two outbreaks of cholera (April and June), but they were promptly suppressed. Every care was taken of the nursing mothers and the weakly, who were very lightly tasked and only worked at convenient hours during the day. During the hot weather every facility was given to the gangs to work early and late so as to avoid the excessive heat of the day. The total number of deaths registered on the works from commencement to the close of the operations was 143, of which 81 were due to cholera. The average relief population being 10,840, the total mortality on the works amounted to only 13 per thousand from all causes and 5·7 per thousand excluding cholera.

7. All work, except the collection of rubble for metal-breaking and the erection of Work done by famine huts for the camps at the beginning, was carried out by famine labour. About three-fourths of the workers were employed on road-work, a little more than one-sixth on village tanks, and the remainder on irrigation works and breaking metal for the East Indian Railway :—

Description of work.	Total day-units employed.
Railways	78,755
Irrigation works	300,310
Roads	2,628,842
Village tanks	578,302
Total	3,586,209

The quantity and description of work done were as follows :—

Railways—

Total ballast collection	...	3·28 lakhs of cubic feet.
Irrigation works	...	4 No.
Earthwork (total quantity)	...	38·19 lakhs of cubic feet.
Stone-pitching (")	...	0·10 "
Roads—		
New roads	...	44 miles.
Raised in class	...	43 "
Repaired	...	4 "
Total earthwork	...	139·78 lakhs of cubic feet.
" metal collection	...	5·85 "
" moorum collection	...	44·28 "
" consolidation	...	21·51 "
Village tanks (total number)	...	29
Total earthwork	...	78·64 lakhs of cubic feet.

8. The total expenditure incurred on Public Works Department works amounted to Rs. 2,99,151, thus :—

Expenditure on works— Rs. 2,16,905.	<i>Direct Relief—</i>				Rs.
	1. Wages	...	...	...	2,05,594
	2. Gratuitous	...	...	...	5,155
	Total				2,10,749
	<i>Incidental Charges—</i>				Rs.
	3. Items of work done by contract		...	...	6,156
	4. Special establishment	...	...	...	28,028
	5. Other items	...	...	...	35,230
	6. Tools and Plant	...	...	...	18,988
	Total				88,402
GRAND TOTAL				2,99,151	

The expenditure * on the different classes of work undertaken was as follows :—

Description of work.				Total No. of day-units relieved.	Total expenditure on works only.	Total value of work done at normal rates.
				No.	Rs.	Rs.
Railways	...	...	...	78,755	6,118	6,186
Irrigation works	...	...	...	300,310	17,858	15,690
Roads	...	...	...	2,628,842	1,58,239	1,05,617
Village tanks	...	...	...	578,302	34,690	29,683
Total				3,586,209	2,16,905	1,57,176

*This includes "Works" only, viz. :—(1) Wages, (2) Gratuitous, (3) Items of work done by contract.

9. The actual cost of relief has been as given below, the average price of the cheapest food-grain during the famine being 12 seers per rupee, and the average wage-basis $13\frac{1}{2}$ seers :—

				No.
No. of day-units relieved per rupee of expenditure on "Works" only ...				16
Do.	do.	total expenditure		12

Cost per 1,000 day-units—

				Rs.	Percentage.
Direct relief ...	{ Wages	...	...	57'0	68'3
	{ Gratuitous	...	...	1'4	1'7
	Total	..	58'4	70'0	
Incidental charges—					
Items of work done by contract				2'0	2'4
Special establishment				8'0	9'6
Other items				10'0	12'0
Tools and Plant				5'0	6'0
Total				25'0	30'0
GRAND TOTAL				83'4	100'0

Total for "Works" only, Rs. 60'4 or 72'4 per cent.

The average wages earned per worker-unit and the cost per unit gratuitously relieved were approximately as follows:—

Persons relieved.	WAGES EARNED PER WORKER AND COST PER UNIT GRATUITOUSLY RELIEVED.		ALLOWANCE PERMISSIBLE UNDER THE GENERAL ORDER.		Remarks.
	Pice.	Equivalent chhittaks of grain at 12 seers per rupee (average market price of the cheapest grain).*	Chhittaks of grain.	Pice at 13½ seers per rupee, (average wage-basis). †	
WORKERS.					
Class I	4'9	14'7	19	6	* This is the average price of the cheapest grain, viz., the cheapest of wheat, rice, gram and juar.
Class II	3'9	11'7	15	4	
Class III	2	6	8	2	
GRATUITOUS.					
Class IV	3'2	9'6	12	4	† The average wage-basis works out to 12 per cent. lower than the average market price of the cheapest grain.
Class V	1'1	3'2	4	1	

The workers earned very nearly their full wages, except the Class I diggers, who appear to have performed, on the whole, only five-sixths of their task. The grain equivalents of their earnings were approximately 75 to 80 per cent. of the rations prescribed by the General Order in consequence of the lowered wage-basis, which was on an average 12 per cent. below the prevailing market rates. The cost of gratuitous relief is remarkably low because of the preponderance of children on this form of relief, the number of adults being only $\frac{1}{10}$ th of the total.

Ratio of famine to ordinary rates of work.

10. The ratios of famine to ordinary Public Works Department rates are as follows:—

Works excluding gratuitous	...	...	...	1'35
Works including "	...	...	...	1'38
Total expenditure including all incidental charges	...	...	...	1'90

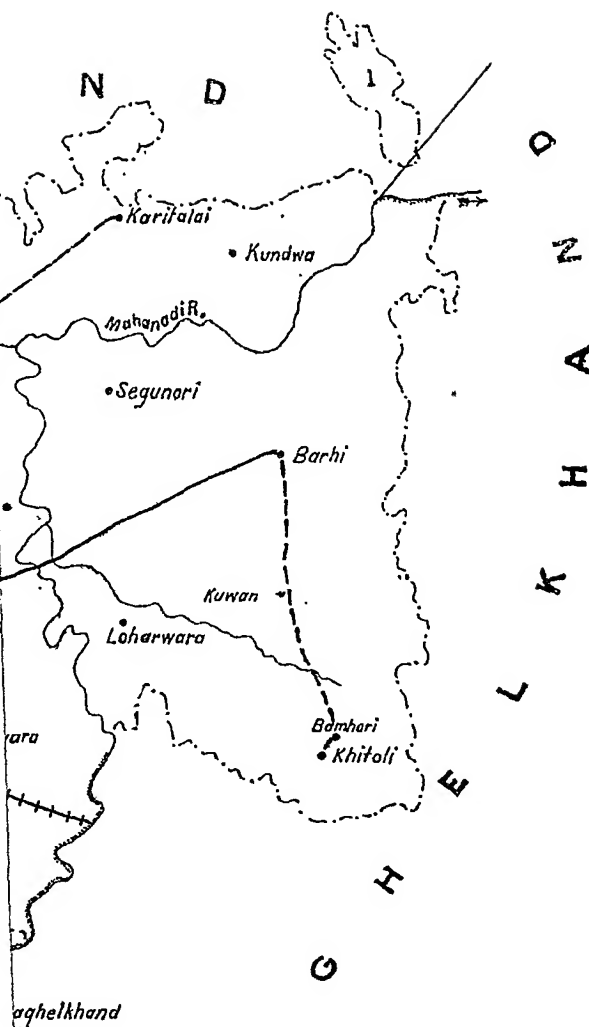
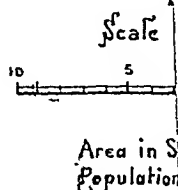
11. The Commissioner considers the works carried out in this district to be on the whole of a useful and permanent character. The new road from Panagarh to Singaldeep (10 miles), which has been banked and moorumed throughout, connects a very productive tract with the railway. The town of Sleemanabad has been connected with the Railway Station (7 miles). Four important roads have been improved: Sehora-Salaia, Kundum-Shahpur, Umaria-Dheemerkhera and Salaia to Umaria. The formation has been raised and a coat of moorum given over considerable lengths of the roads. Twenty-nine old village tanks have been deepened and otherwise improved, and four small irrigation tanks have been constructed, viz., one at Darsani, two at Semapatti and one at Panagarh.

Casualties and Prosecutions.

12. There were two deaths in the field staff, viz., one Head Constable and one Sub-Overseer. There was no criminal prosecution.

JUBBULP

SHOWING WORK DONE E



aghelkhand

REFERENCES

District.....	JUBBULPORE
Tahsil.....	□ Sihora
Town.....	• Katangi
Class...I.... Road.....	=====
...do...II.....	=====
...do...III B.....	=====
...do...IIIA.....	=====
District Boundary.....	-----
...do...Tahsil.....	-----
Railway Open.....	+++++
...do...projected.....	+++++

REFERENCES TO WORK DONE BY FAMINE LABOUR

I-Railways	
(i) New Railways	
Earth work.....	30 26
Ballast Collection.....	25 30
Do: at quarries.....	○
(ii) Improvements to existing Rlys	
Earth work.....	20 25
Ballast collection.....	15 20
Do: at quarries.....	○
II-Irrigation Tanks	
Completed.....	□
In complete.....	□
III Road Work	
Embanked.....	25 26
Moorumed.....	20 25
Metalled with earthen sides.....	15 20
Do without..... do.....	10 15
New roads.....	N.R.
Raised in class.....	R.C.
Repaired.....	R.P.
Metal at road sides.....	-----
Moorum..... do.....	-----
Metal at quarries.....	○
Moorum..... do.....	○
IV-Village Tanks	
Completed.....	◇
Incomplete.....	◇
Famine Relief Camps.....	①

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SEONI DISTRICT.

Relief Operations under the Public Works Department from October 1899 to October 1900.

Warning was given to the Public Works Department in September 1899 for the opening of relief-works in the Seoni Tahsili. The first camp (Ari) was opened on the 21st October 1899, with an average attendance of 1,500. People began ere long to come in rapidly, and by the 31st January five relief-works were open, and the average attendance rose to upwards of 25,000 daily. The attendance fell to about 13,000 at the end of February, and for the next four months averaged 12,000 daily. The exodus commenced with the setting in of the monsoon, and the works were finally closed on the 14th October 1900.

2. Altogether six camps were opened in this district, the distance from the furthest affected village to the works being 6 miles average and 20 miles maximum. The daily attendance per charge averaged 3,117, *i. e.*, one out of every 7, the maximum being 11,000 or over half the population served. The average and maximum daily numbers for the whole district were 11,000 and 28,000 respectively. Labour was chiefly employed on the construction of new and improvement of existing roads and village tanks, and on the earthwork and ballast collection for the portion of the Satpura Railway lying in this district.

The total number of day-units relieved amounted to 3'645 millions, of whom 1'209 were men, 1'646 women and 0'790 children. The total expenditure was 3'54 lakhs of rupees, of which 2'60 lakhs were expended on direct relief (wages and gratuitous charges).

3. The following table illustrates the main features of the attendance on the works month by month :—

Month.	Number of charges.	Average daily attendance.	Maximum daily attendance.	Proportion of men, women and children.	PROPORTION OF WORKERS AND DEPENDANTS.			PERCENTAGE OF WORKERS AND DEPENDANTS OVER AFFECTED POPULATION.			
					Inter-mediate.	Task.	Gratui-tous.	Inter-mediate	Task.	Gratui-tous.	Total.
October 1899 ...	1	1,456	2,250	Men 33 Women 45 Children 22	99'0	...	1'0	1'2	...	0'01	1'21
November „ ...	2	9,615	14,296		97'0	0'4	2'6	7'77	0'03	0'21	8'01
December „ ...	3	16,157	20,163		94'2	0'5	5'3	4'10	0'02	0'23	4'35
January 1900 ...	4	25,385	27,847		90'0	1'0	9'0	8'43	0'10	0'84	9'37
February „ ...	5	15,910	20,729		87'0	2'0	11'0	5'10	0'12	0'65	5'87
March „ ...	5	12,974	16,485		85'0	4'0	11'0	4'07	0'19	0'53	4'79
April „ ...	6	14,040	17,592		82'0	6'0	12'0	4'25	0'31	0'62	5'18
May „ ...	5	13,627	16,983		78'0	9'0	13'0	3'92	0'45	0'65	5'02
June „ ...	5	9,180	12,159		82'0	3'0	15'0	2'78	0'10	0'51	3'39
July „ ...	2	6,166	7,965		81'3	0'2	18'5	2'51	...	0'57	3'08
August „ ...	2	3,142	3,617		83'0	...	17'0	0'70	...	0'15	0'85
September „ ...	1	2,063	2,940		82'0	...	18'0	0'46	...	0'10	0'56
October „ ...	1	1,217	1,303		81'0	...	19'0	2'46	...	0'58	3'04
	6	11,143	27,847		86'0	3'0	11'0	3'61	0'13	0'46	4'20

4. There was a considerable rush of workers at the commencement, but with plenty of tank work available within easy reach, no difficulty was experienced in the disposition of relief labour to the best advantage. Later on, as soon as arrangements were completed for the construction of the Satpura Railway and the improvement of the Seoni Water-works reservoir, workers were successfully drafted to them from the roads. The difficulty arising from the undue proportion of women in certain camps was met by organising separate carrier-gangs composed entirely of women for the conveyance of moorum and metal.

5. The system of carriage followed is thus described by the Executive Engineer:—

"In moorum leading, the trestle system was first tried, but the carriers refused to treat the trestles seriously. They were used only as a sort of *crèche* while the carriers transferred their baskets from head to head. The system of short leads was moreover very unpopular. To keep all the gangs at exactly the same strength was a very difficult matter, and any discrepancy in the case of a single gang disorganised the whole arrangements. If one gang idled or stopped to drink water, the whole of the other gangs had to wait. It was impossible for any gang to do short work, without the whole number of gangs being fined. Eventually the system was abandoned, and a system of long leads was adopted, the same individuals going the whole distance. Up to a lead of one mile this worked very satisfactorily, and for longer leads depôts were formed and the same system employed."

System of works, tasks, dependants, &c.

6. The average proportion of workers on the two systems, and non-workers, was as follows:—

Workers—					
Intermediate	...	...	...	...	86
Task "	...	...	...	...	3
Non-workers					
	...	...	...	...	11
Total					100

It will be seen from the table in paragraph 3 that the proportion of dependants went on increasing steadily from 2·6 per cent. in November 1899 to 19 per cent. in October 1900, right up to the close of the operations. This may be explained by the fact that a comparatively large percentage of dependants remained behind, as workers gradually returned in search of agricultural employment from the last week of May.

The standard tasks for the district were:—

Earthwork	...	...	...	80 cft. (Class I).
Metal breaking (basalt) ...	...	...	...	4½ " (")

The earthwork task was reduced during the excessive heat of May and June to 70 cubic feet, but was again raised during the rains, the maximum task assigned at the later stages being 100 cubic feet (Class I).

There was on the whole no difficulty in exacting an adequate task from the workers.

7. The condition of the workers was on the whole satisfactory. In February the prevalence of a skin disease was reported from one of the camps (Ugli No. 3). In April many of the workers were found to be suffering from ulcers in the same camp. Cholera broke out at Baberia in June 1900, but it was soon subdued. A sufficiency of water-supply was maintained by improving the existing wells and digging kutchas wells in the beds of nallas and tanks. Nursing mothers were lightly tasked and were not allowed to work for more than 4 hours a day. The weakly children were fed on milk and other special diet. The supply of food-grains was ample throughout. The *banias*, in some cases, charged an exorbitant rate for grinding corn. A system of co-operative grinding was introduced, which compelled the *banias* to lower their prices.

The total number of deaths registered on the Public Works Department works was 337, of which 155 were due to cholera. The average relief population being 11,143, the total mortality on the works during the twelve months, October 1899 to October 1900, was 30·2 per *mille* from all causes and 16·3 excluding cholera.

8. In view of the impending distress which threatened to be acute and widespread and of the inexpediency of adding to the burdens of the Province by constructing new roads of more or less doubtful utility, orders of the Government of India were solicited at a very early stage for the inclusion of the earthwork and ballast collection on the Satpura Railway in the programme of works for the Satpura districts. Surveys of a considerable number of village tanks were also completed early to supplement the work offered at camps engaged in road construction. The improvement of the storage reservoir at Baberia for the water-supply of Seoni also afforded excellent employment for the relief-workers. The distribution of the workers was as follows:—

Description of works.				Total day-units employed.
Railway	...	...	...	526,031
Water-supply reservoir	...	...	...	358,218
Roads	...	...	...	1,482,431
Village tanks	...	...	...	1,278,772
				<hr/> 3,645,452

9. The quantity and description of work done were as follows:—

Railways—

Total earthwork done	...	...	52.5 lakhs of cubic feet.
Total ballast collection	...	...	0.5 "

Water-supply Reservoir—

Number	...	...	1
Total earthwork	...	...	17.4 lakhs of cubic feet.
„ stone-pitching*	...	...	0.3 "
„ masonry	...	...	0.04 "

Roads—

New roads	(total length)	...	35 miles.
Roads raised in Class	„	...	37 "
Roads, repaired	„	...	31 "
Total earthwork	...	...	17 lakhs of cubic feet.
„ metal collection	...	...	6.4 "
„ moorum „	...	...	10.9 "
„ consolidation	...	...	9.9 "

Village tanks—

Total number	...	...	37
„ earthwork	...	...	165.2 lakhs of cubic feet.

10. The total expenditure incurred on Public Works Department works was Rs. 3,53,578, thus:—

Expenditure on works= Rs. 2,68,335.	{ <i>Direct Relief—</i>			Rs.
	1. Wages	...	...	2,49,791
	2. Gratuitous	...	...	10,252
	Total			2,60,043
	{ <i>Incidental Charges—</i>			
	3. Items of work done by contract	...	...	8 292
	4. Special establishment	...	...	35 344
	5. Other items	...	...	26,423
	6. Tools and Plant	...	...	23,476
	Total			93,535
GRAND TOTAL			3,53 578	

The expenditure* by classes of works was as given below:—

Description of work.				Total No. of day-units relieved.	Total expenditure on works only.	Total value of work done at normal rates.
				No.	Rs.	Rs.
Railways	...	..	...	526,031	36,541	21,659
Water-supply reservoir	...	...	...	358,218	26,512	23,702
Roadwork	...	..	...	1,482,431	1,12,498	83,857
Village tanks	...	...	...	1,278,772	92,784	75,045
Total				3,645,452	2,68,335	2,04,263

* This expenditure includes (1) Wages, (2) Gratuitous and (3) Items of work done by Contract.

11. The cost of relief has been as follows, the average price of the cheapest food-grain during the period being 10½ seers per rupee and the average wage-basis 12 seers :—

				No.
Cost of relief and wages earned by relief workers.				
No. of day-units relieved per rupee of expenditure on works only	...	...	...	14
Do. do. total expenditure	...	...	...	10
Cost per 1,000 day-units—				
				Rs. Percentage.
Direct relief	{ Wages	...	...	69 71
	{ Gratuitous	...	...	3 3
Total				72 74
Incidental charges—				
Items of work done by contract	...	...	...	2 2
Special establishment	...	...	...	10 11
Other items	...	...	...	7 7
Tools and Plant	...	...	...	6 6
Total				25 26
GRAND TOTAL				97 100

Total "Works"
= Rs. 74 or 76
per cent. of
the total.

The average wages earned per worker-unit and the cost per unit gratuitously relieved were approximately as follows :—

Persons relieved.	WAGES EARNED PER WORKER AND COST PER UNIT GRATUITOUSLY RELIEVED.		ALLOWANCE PERMISSIBLE UNDER THE GENERAL ORDER.		Remarks.
	Pice.	Equivalent chhattaks of grain at 10½ seers per rupee.*	Chhattaks of grain.	Pice at 12 seers per rupee.†	
WORKERS.					
Class I	6	15.8	19	6	* This is the average of the cheapest grain, viz., cheapest of wheat, rice and juar.
Class II	4.7	12.3	15	5	
Class III	3	7.8	8	3	
GRATUITOUS.					
Class IV	4.8	12.8	12	4	† This is the average wage-basis for the whole period of operations.
Class V	1.6	4.0	4	1	

12. The ratio of famine to the ordinary contract rates stands thus :—

	Ratio.
Works excluding gratuitous	1.26
Works including "	1.31
Total expenditure including all incidental charges	1.73

13. The works carried out in this district by relief labour are all distinctly useful. Permanence and utility of and of a permanent character. Earthwork for a length of 3½ miles on the main line and 16 miles on the Mandla Branch has been carried out on the Satpura Railway. The storage reservoir at Baberia for the water-supply of Seoni has been greatly improved; the embankment and puddle walls have been raised so as to increase the capacity by 10 million cubic feet, and the escape channel has been enlarged for additional security. Two useful cross-country roads have been constructed, Ugli-Chapara (20 miles) and Burghat-Kaniwara (15 miles). The Seoni-Katangli Road has been improved practically throughout, the formation having been raised and surfaced with moorum. Moorum and metal have been collected for raising in Class the Kahani-Ghansore and part of the Seoni-Mandla Road. A large amount of metal has been collected on the existing Class I Road from Seoni to Balaghat. Thirty-seven village tanks have been deepened and strengthened.

14. There were no casualties among the Public Works Department officials in this district. One Officer-in-charge and three clerks, all of Ari Camp, were prosecuted for criminal breach of trust with regard to certain charitable clothing. They were all discharged for want of sufficient proof.

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REFERENCES

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MANDLA DISTRICT.

Relief Operations under the Public Works Department from April 1900 to September 1900.

A Public Works Department relief camp was opened in the Dindori Tahsili on the 1st April 1900; but it was not until the setting in of the monsoon that the work began to attract labourers to any considerable extent. The attendance at this one camp in the district never exceeded 3,400, the average being about half this number. The work was spread over 70 miles of road and served a strip of country 10 miles wide, *i. e.*, 5 miles on either side of the road. The numbers began to decline about the middle of July; there was a slight temporary rise in September, but by the end of the month all works were closed in this district.

2. Labour was wholly employed on road-work. The total number of day-units relieved from April to September was 0·288 millions, of which 0·092 were men, 0·168 women and 0·028 children. The total expenditure on all accounts was 0·34 lakhs of rupees, of which 0·26 lakhs were spent on direct relief, *vis.*, wages alone. The following table brings out the main particulars connected with the numbers relieved in this district :—

Month.	Number of charges.	Average daily attendance.	Maximum daily attendance.	Proportion of men, women and children.	PROPORTION OF WORKERS AND DEPENDANTS.			PERCENTAGE OF WORKERS AND DEPENDANTS OVER TOTAL AFFECTED POPULATION.			
					Inter-mediate.	Task	Gratuitous.	Inter-mediate.	Task.	Gratuitous.	Total.
April 1900 ...	1	131	807	33 58 9 Men Women Children	100	...	...	0·82	...	...	0·82
May " ...	1	1,582	2,627		100	...	...	0·47	...	...	0·47
June " ...	1	2,520	3,396		100	...	...	0·74	...	...	0·74
July " ...	1	1,821	3,044		100	...	...	0·54	...	...	0·54
August " ...	1	1,542	2,723		100	...	...	0·45	...	...	0·45
September " ...	1	1,841	2,755		100	...	...	0·54	...	...	0·54
	1	1,573	3,396		100	...	...	0·95	...	...	0·95

3. The most remarkable feature in the famine administration of this district has been the willingness with which the aboriginal tribes responded to the efforts made by the Public Works Department to bring work-relief within their reach. They yielded readily to a severe labour-test; and with skilful management, performed almost the full tasks allotted to them, and thereby earned sufficient wages to maintain themselves in health and condition. The organisation of regular relief camps on the lines laid down in the General Order was deemed unnecessary. Work was started on a simple and easily understood piece-work system on the ordinary Public Works Department methods. The road was divided up into convenient sections, each section employing 300 to 600 workers under the supervision of a Work Agent assisted by a couple of mates. The workers formed themselves into gangs, consisting sometimes of a family of 5 or 6 members, and oftener of a group of two or more families, usually not exceeding 20 in number. Each gang worked separately and was paid strictly by results. There were no infirm gangs, no kitchens, no gratuitous doles and no rest-day wage. Only the able-bodied came to the works, the dependants being supported from the earnings of the workers or relieved at the Civil Department kitchens.

4. The behaviour of the Gonds, in the novel situation described in the foregoing paragraph, is thus related by the Executive Engineer, Jubbulpore Division :—

"At first it was feared that the Gonds would not understand this piece-work system and would be frightened away from the works. A minimum wage was accordingly fixed by the Commissioner for Gonds on the 13 seers wage-basis. Experience showed, however,

that the Gonds were as eager as any to earn all they could, and the minimum wage very soon fell entirely into disuse. This was mainly owing to the tact and good sense shown by Mohamed Ismail and his subordinates in their dealings with the workers. The experiment of carrying on relief work through a contractor was tried successfully. The contractor was employed principally on the repairs to the Shahpura-Kundam Road. This section is the furthest from the head-quarters of the Sub-Division, and this method was found to be a great convenience. The work also was of a kind, the measurement of which could be easily checked. Measurements were made, and the contractor's bills paid weekly by the Sub-Divisional Officers at normal rates. The contractor on his part paid the workers daily at the rates in force on the rest of the works. This left him the necessary margin of profit. The workers were free to go to the contractor or to the Public Works Department works at their own will. The fact that they went to the work nearest their homes shows that the rates were fair and evenly balanced * * *. The experience gained seems to show that where work is plentiful and numbers are not too large, the system described above is efficient and very economical."

Condition of workers. 5. The condition of the workers was throughout good; there were no deaths and no epidemics.

Work done. 6. The quantity and description of work carried out by relief labour were as follows:—

New roads (total length)	...	...	25 miles.
Roads raised in Class (total length)	...	...	18 "
Roads repaired (total length)	...	...	30 "
Total earthwork done	...	...	23.10 lakhs of cubic feet.
" moorum	...	...	13.96 " "
" consolidation	...	...	3.55 " "

7. The ghat-work commenced in the famine of 1897 on the Shahpur-Shahpura Road has been completed during the present famine; the Shahpura-Kundam Road has been improved by a 6" coat of moorum throughout, and certain repairs to the Dindori-Birsinghpur Road have been carried out.

The total value of work done at normal rates is 0.29 lakhs of rupees against a total expenditure on all accounts of 0.34 lakhs.

Expenditure. 8. The total expenditure incurred amounts to Rs. 33,547 as follows:—

Expenditure on "Works" = Rs. 27,576.	<i>(Direct Relief—</i>				Rs.
	1. Wages	...	...	...	* 25,984
	2. Gratuitous	...	...	...	<u>Nil.</u>
				Total	25,984
	<i>(Incidental Charges—</i>				Rs.
	3. Items of work done by contract	...	...	...	1,592
	4. Special establishment	...	...	...	1,431
	5. Other items	...	...	...	2,134
	6. Tools and Plant	...	...	...	<u>2,406</u>
				Total	<u>7,563</u>
GRAND TOTAL				...	<u>33,547</u>

* Includes Rs. 4,800 paid by contractor on account of wages.

Cost of relief and wages earned by relief-workers.

9. The cost of relief has, on the whole, been as follows, the average price of food-grains for the district during the period under review being $11\frac{1}{2}$ seers per rupee:—

				No.	
Number of day-units relieved per rupee of expenditure on "works" only...				11	
Do. do. total expenditure ...				9	
Cost per 1,000 day-units—				Rs. Percentage.	
Direct relief ...	{	Wages	...	...	90 20 77'46
		Gratuitous	...	...	Nil. ...
			Total	...	90'20	77'46
				For "Works" only Rs. 95'73 or 82'21 per cent.	
Incidental charges—					
Items of work done by contract	...	...	...	5'53	4'75
Special establishment	...	...	...	4'97	4'26
Other items	...	...	...	7'41	6'36
Tools and Plant	...	...	...	8'35	7'17
			Total	26'26	22'54
			GRAND TOTAL	116'46	100'00

For "Works" only
Rs. 95'73 or
82'21 per cent.

The average wages earned work out as follows:—

Persons relieved.	WAGES EARNED PER WORKER.		ALLOWANCE PERMISSIBLE UNDER THE GENERAL ORDER.		Remarks.
	Pice.	Equivalent chhittaks of grain at 8 seers per rupee (average market price of food-grains).*	Chhittaks of grain.	Pice at 10½ seers per rupee (average wage-basis). †	
WORKERS.					
Class I ...	7'0	14'0	19	7	* This was the average price of food-grains on the works. † The average price of the cheapest grain for the whole district, viz., the cheapest of wheat, rice and gram was 11½ seers. The market rate on the works, however, averaged 8 seers. A uniform wage-basis of 10½ seers was maintained throughout the operations.
Class II ...	5'5	11'1	15	6	
Class III ...	3'0	6'0	8	3	
GRATUITOUS.					
Class IV ...	...	...	...	...
Class V ...	...	...	...	...

The workers earned practically their full wages. The grain equivalents of their earnings were approximately three-fourths of the rations prescribed by the General Order.

Ratio of famine to ordinary rates of work.

10. The ratio of the famine to the ordinary Public Works Department rates works out as follows:—

On works only (excluding gratuitous)	...	0'94
On total expenditure including all incidental charges	...	1'14

The famine rates varied but slightly from the normal, which speaks well for both the working capacity of the aborigines and the good and tactful management of the Sub-Divisional Officer (Sub-Overseer Mohamed Ismail).

Permanence and utility of works.

11. The Commissioner's remarks on the utility of the works carried out are quoted below:—

"The road-work effected is useful, but I wish to bring prominently to notice that the Shahpur-Birsinghpur Road is impassable for the ten miles of its length in Rewah Territory, and that until this length is put into order, our expenditure will bear but little fruit."

Prosecutions and casualties in the famine staff.

12. There were no prosecutions or casualties among the officials in this district.

SAUGOR DISTRICT.

Relief Operations under the Public Works Department from October 1899 to October 1900.

The first relief charge under this Department was opened on the 27th October after only a week's warning. Numbers rose rapidly in December and January, specially in the northern half of the district, the highest point of relief being reached in March 1900. Measures for the contraction of works were taken towards the end of May. The numbers went down steadily from the last week of June to the end of August; then remained stationary for nearly six weeks, after which there was a sharp decline, until the final closure of works on the 27th October 1900, *i. e.*, exactly one year after the opening of the first relief work in the district.

2. The total number of charges opened was 11, the average distance from any charge to the furthest affected village being 5 miles. The average daily attendance per charge was 2,200, *i. e.*, about 1 out of every 15 of the affected population residing within the area served; the maximum being 12,000 or nearly 1 out of every 4. The average attendance for the whole district was 11,700; and the maximum attendance on any one day was 22,000 in March 1900. The camps were closed as follows: one in May, three in July, two in August and two in September, by the middle of which month the number of works was reduced to the limit prescribed in Famine Circular No. F-49, dated the 7th May 1900. The two remaining camps were closed in October 1900.

Labour was principally employed on raising existing roads in class, collecting metal for their future maintenance, and on constructing new and improving old village tanks.

The total number of day-units relieved from the commencement to the close of operations was 3'602 millions, of which 1'028 were men, 1'595 women and 0'979 children. The total expenditure, including all charges, amounted to 3'66 lakhs of rupees, of which 2'37 lakhs were spent on direct relief, *viz.*, wages and gratuitous relief alone.

3. The following table exhibits the course of operations from their commencement to close :—

Month.	Number of charges.	Average daily attendance.	Maximum daily attendance.	Proportion of men, women and children.	PROPORTION OF WORKERS AND DEPENDANTS.			PERCENTAGE OF WORKERS AND DEPENDANTS OVER AFFECTED POPULATION.			
					Inter-mediate.	Task.	Gratui-tous.	Inter-mediate.	Task.	Gratui-tous.	Total.
October 1899 ...	1	156	281	Men 29 Women 44 Children 27	98'00	...	2'00	0'03	...	...	0'03
November „ ...	2	1,563	3,656		92'18	0'05	7'77	0'47	...	0'04	0'51
December „ „	5	10,613	17,139		91'00	...	9'00	3'71	...	0'37	4'08
January 1900 ...	5	18,528	19,325		89'56	0'42	10'02	6'38	0'03	0'72	7'13
February „ ...	6	9,867	16,382		84'00	3'00	13'00	3'19	0'11	0'49	3'79
March „ ...	6	15,266	22,022		80'00	5'00	15'00	4'70	0'29	0'88	5'87
April „ ...	7	15,018	16,586		76'00	9'00	15'00	3'80	0'45	0'75	5'00
May „ ...	8	16,789	18,119		77'00	8'00	15'00	4'30	0'45	0'84	5'59
June „ ...	7	15,755	19,186		89'00	1'00	10'00	4'65	0'05	0'52	5'22
July „ ...	6	13,475	14,123		89'30	0'20	10'50	3'05	...	0'36	3'41
August „ ...	4	5,254	6,045		93'30	0'10	6'60	0'83	...	0'06	0'89
September „ ...	2	4,201	4,590		94'00	...	6'00	0'67	...	0'04	0'71
October „ ...	1	3,734	4,407		95'00	...	5'00	0'60	...	0'03	0'63
	11	11,700	22,022	...	85'00	3'00	12'00	2'7	0'11	0'37	3'18

4. No difficulties of a special nature were encountered, except that arising from the influx of large numbers of foreigners from the Rajputana States, Bhopal, Gwalior and Lalitpur, who as a rule arrived in miserable condition. The *Marwaris* alone numbered 2,000 average daily and lingered on the works till the close of the operations. Mr. Fuller's ticket system rendered "rushes" impossible; and with the exception of the Binaika Charge No. V, where, in the month of March, the workers became in some measure unmanageable for a time (maximum 12,000 on one day), nothing like pressure on account of numbers was felt anywhere in the district. In the matter of tasking, the high proportion of women never gave cause for anxiety, as there was abundance of road material (rubble, moorum, metal, &c.) to be carried by head-loads. The carrying gangs on roads and tanks consisted almost entirely of women.

5. The average proportion of workers on both the intermediate and task-work systems and their dependants was as follows :—

Workers—			
Intermediate	...	...	85
Task	...	...	3
Non-workers	...	...	12
Total			100

The table given in paragraph 3 will show that the proportion of dependants followed the rise and fall in the total numbers on relief pretty closely. They rose from 2 per cent. in October to 15 per cent. in March, when the total numbers were highest, and began to fall off from June as soon as the orders of May caused a diminution in the total numbers.

6. The standard tasks for the district were—earthwork 80 cubic feet, and metal breaking (sandstone) 6 cubic feet. A fair approach to these tasks was seldom made, and even with persistent fining the exaction of a proper task was often attended with considerable difficulty.

The Commissioner remarks as follows on the subject :—

"The Saugor workers certainly gave more trouble over the performance of their tasks than was experienced in other districts. This was not due to poverty of condition, for the strong and undoubtedly well-to-do were as often short as the feeble.

Vide paragraph 3 of Commissioner's letter No. 10908, dated the 14th November 1900.

"But my enquiries seemed to show that one reason for short work and indifference to fines was that famine labour was seldom relied on by a family for more than part of its support."

7. The condition of the workers was on the whole good. The difficulty of water-supply during the hot weather was successfully overcome, often at considerable expense in consequence of the limited sources of supply and the necessity for carting water from long distances. Proper hutting arrangements were made for the workers during the rains.

The nursing mothers received special care, were lightly tasked, and were not allowed to work more than 4 hours a day, *viz.*, 2 in the morning and 2 in the afternoon. There was a severe outbreak of cholera only once, *viz.*, in June at Sehora, which was quickly stamped out by the strict enforcement of sanitary measures. The total number of deaths registered on the works from the commencement to the close of the operation was 209, of which 68 were due to cholera. The average relief population being 11,700, the total mortality on the works during the 12 months (October 1899 to October 1900) amounted to only 18 per thousand from all causes and 12 per thousand excluding cholera.

8. All work, except the collection of rubble for metal breaking at the commencement, and the erection of huts for the camps, was carried out by famine labour. The workers were chiefly employed on the construction and repairs of village tanks and the improvement of existing roads :—

Description of work.	Total day-units employed.		
Road-work	1,362,880
Tank-work	2,239,950
Total	3,602,830

The quantity and description of work done was as follows:—

Roads:—

Raised in Class	...	...	45 miles.
Repaired	...	...	7 "
Total earthwork	...	...	11'87 lakhs of cubic feet.
" metal collection	...	...	8'04 "
" rubble collection	...	...	5'15 "
" moorum collection	...	...	14'32 "
" consolidation	...	...	9'64 "

Village tanks ... No. 7

Total Earthwork ... 188 84 lakhs of cubic feet.

The value of work done at normal rates is given below:—

Road-work	...	...	0'54 lakhs of rupees.
Village tanks	...	...	1'05 "
			1'59 against a total expenditure on all accounts of 3'61 lakhs.

Total expenditure.

9. The total expenditure incurred on Public Works Department works amounted to Rs. 3,65,775 thus:—

Expenditure on works— Rs. 2,41,636.		<i>Direct Relief—</i>			
		1. Wages	...	...	Rs. 2,22,527
		2. Gratuitous	...	...	14,476
		Total		...	2,37,003
		<i>Incidental Charges—</i>			
		3. Items of work done by contract	...	...	4,633
		4. Special establishment	...	...	38,624
		5. Other items	...	...	61,887
		6. Tools and Plant	...	...	23,628
		GRAND TOTAL		...	3,65,775

The expenditure* on the two classes of work undertaken was as exhibited in the following table:—

Description of work.			Total number of day-units relieved.	Total expenditure on works only.	Total value of work done at normal rates.
			No.	Rs.	Rs.
Roads	...	...	1,362,880	97,397	54,200
Tanks	...	...	2,239,950	1,44,239	1,04,946
Total	...	...	3,602,830	2,41,636	1,59,146

* This includes "Works" only, viz:—(1) Wages, (2) Gratuitous, (3) Items of works done by Contract.

10. The cost of relief works out as follows, the average price of the cheapest food-grains during the period covered by the famine being 11 seers per rupee, and the average wage-basis 12 seers:—

No. of day-units relieved per rupee of expenditure on works only				No.
Do.	do.	total expenditure	...	15
Cost per 1,000 day units—				10
				Rs. Percentage.
Direct relief	{ Wages	...	62	61
	{ Gratuitous	...	4	4
Total		...	66	65
Incidental charges—				} Total "Works" Rs. 67 07 66 per cent.
		Rs.	1	
Items of work done by contract		...	11	
Special establishment		...	17	
Tools and Plant		...	7	
Total		...	36	35
GRAND TOTAL		...	102	100

The average wages earned per worker-unit and the cost of relief per unit gratuitously relieved work out as follows :—

relieved work out as follows :—

Persons relieved.		WAGES EARNED PER WORKER AND COST PER UNIT GRATUITOUSLY RELIEVED.		ALLOWANCE PERMISSIBLE UNDER THE GENERAL ORDER.		Remarks.
		Pice.	Equivalent chhittaks of grain at 11 seers per rupee (average market price of cheapest grain).*	Chhittaks of grain.	Pice at 12 seers per rupee (average wage-basis).†	
WORKERS.						
Class I	...	5'7	15'7	19	6	* This is the average price of the cheapest grain, viz., the cheapest of wheat, rice, gram and juar.
Class II	...	4'5	12'4	15	5	† The average wage-basis works out to 9 per cent. lower than the average market price of cheapest grain.
Class III	...	3'0	8'2	8	3	
GRATUITOUS.						
Class IV	...	5'6	15'4	12	4	
Class V	...	1'9	5'2	4	1	

The figures are only approximate, but they would go to show on the whole that while the workers earned only 75 to 80 per cent. of the allowance permissible under the General Order, the dependants actually cost Government more than what was laid down in the General Order. The cost of gratuitous relief would probably have been less, were it not for the expenditure incurred in feeding and tending the sick, nursing mothers, &c. The greatest care of these was taken in the field hospitals, and special diet was invariably given to those in delicate condition.

Ratio of famine to ordinary rates of work.

11. The ratio of famine to the ordinary contract rates works out as follows :—

			Ratio.
Works excluding gratuitous	...	...	... 1'43
„ including „	...	...	... 1'52
Total expenditure including all incidental charges	...	...	... 2'30

12. The Commissioner remarks as follows on the permanence and utility of works carried out by relief labour in this district (*vide* paragraph 2 of Commissioner's letter No. 10908, dated the 14th November 1900): "So far as the road-work goes, I cannot say that the famine will leave us much of use on the Cawnpur-Jhansi and Khimlasa roads. But very useful work has been done on the Rehli and Rahatgarh roads, and also on the Jhansi road just outside Saugor. Tank excavation has been the backbone of the programme. The tanks will not be used for irrigation, as irrigation is not practised in Saugor. But they will be useful for men and for cattle: the tanks at Dhangar, Tinra, Khimlasa, Rajwans and Barodia will greatly add to the grazing value of the country, and cattle-grazing has in some tracts almost taken the place of the declining agriculture."

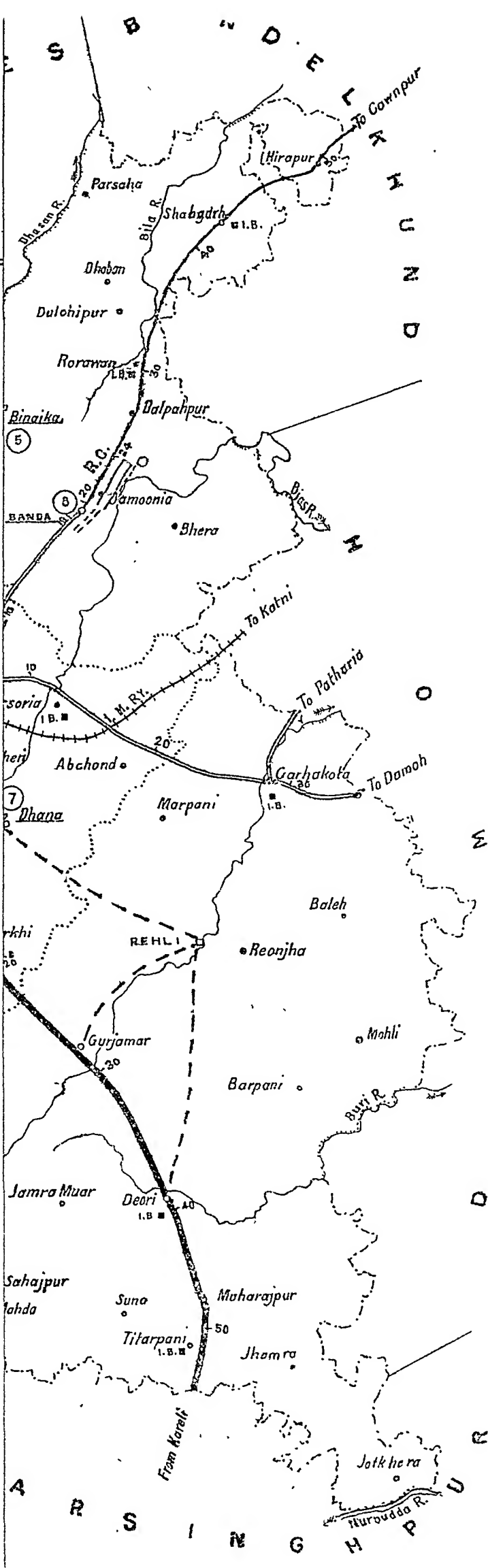
13. Only one criminal prosecution, viz., of a Gang Muharrir on the Dhangar Charge No. 1, was instituted in this district; but it failed for want of sufficient evidence. There were five deaths in the field staff, viz., one Officer-in-charge (Hiralal), one Work-Agent and three Gang Muharrirs; all except the Officer-in-charge having died of cholera.

Prosecution of, and Casualties in, the famine staff.

S AU

SHOWING WORK

10



NAGPUR CIVIL DIVISION.

NAGPUR DISTRICT.

Relief Operations under the Public Works Department from October 1899 to September 1900.

The Public Works Department was warned on the 15th September 1899 that relief works would be necessary at Deolapar in the Ramtek Tahsil. This camp was opened on the 15th October, and by the first week of November three more charges were opened. Workers came in slowly in the north and east, but rapidly in the Umrer Tahsil to the south, where an overflow camp had to be opened very shortly. The attendance rose from an average of about 900 daily in October to nearly 15,000 at the end of December; the Bhiwapur Charge in the extreme south alone accounting for nearly half the number. From December to May the rise in numbers was continuous, with slight variations in February and March, when the tasks were enhanced and an attempt was made to introduce the relay system of carriage of metal by head-loads. The last week of May marked the highest point of relief, the number of camps open at the time being seven and the maximum attendance on any one day 39,054. The slight fall during the first fortnight of April was occasioned by the reluctance of the workers of the Mahoda Camp on the Eastern Road to proceed to Nagpur on the closure of that camp. The orders contained in Famine Circular No. F-49, dated the 7th May, were promptly given effect to. All but three camps were closed by the middle of August, and the operations came to an end on the 29th September 1900.

2. Eleven camps were opened in all, of which only 7 were in operation at any one time. The average and maximum attendance per charge were 3,226 and 10,674 or $\frac{1}{10}$ and $\frac{1}{2}$ of the affected population within the area served, respectively. The attendance for the whole district was about 15,000 average daily, the maximum being 39,000. Labour was chiefly employed on metal collection for the principal roads, and the improvement of the group of tanks in the neighbourhood of the Nagpur City.

The total number of day-units relieved was 4'853 millions, of which 1'616 were men, 2'187 women and 1'050 children. The total expenditure amounted to 6'17 lakhs of rupees, of which 3'56 lakhs were spent on direct relief.

3. The following table shows the progress of operations during the period under review :—

Months.	Number of charges.	Average daily attendance.	Maximum daily attendance.	Proportion of men, women and children.	PROPORTION OF WORKERS AND DEPENDANTS.			PERCENTAGE OF WORKERS AND DEPENDANTS OVER AFFECTED POPULATION.			
					Inter-mediate.	Task.	Gratuitous.	Inter-mediate.	Task.	Gratuitous.	Total.
October 1899 ...	1	868	1,080	33. 45. 22. Men Women Children	93	...	7	0'57	...	0'04	0'61
November " ...	4	6,136	10,827		91	...	9	3'93	...	0'39	4'32
December " ...	5	12,641	16,031		90	...	10	8'01	...	0'89	8'90
January 1900 ...	5	14,894	15,775		90	...	10	6'98	...	0'78	7'76
February " ...	5	15,888	19,333		90	...	10	7'44	...	0'83	8'27
March " "	5	18,143	21,060		90	...	10	8'50	...	0'95	9'45
April " ...	6	24,536	29,735		88	...	12	11'13	...	1'52	12'65
May " ...	7	28,699	39,054		87	...	13	12'87	...	1'92	14'79
June " ...	6	26,940	28,013		87	...	13	3'85	...	0'58	4'43
July " ...	5	11,646	18,552		85	...	15	1'31	...	0'23	1'54
August " ...	3	7,364	9,392		83	...	17	0'81	...	0'16	0'97
September " ...	1	3,250	3,868		87	...	13	0'37	...	0'06	0'43
	12	14,870	39,054		88	...	12	3'68	...	0'50	4'18

4. The organisation of works was not attended with any exceptional difficulties. There was some overcrowding in the Thana and Bhiwapur Organisation. Charges in April and May, but useful employment was readily available for workers. The short-lead system of carrying metal by head-loads did not prove a success and had to be discontinued. At the Ambajheri tank many of the gangs worked on the relay system of their own accord with a comparatively short lead and high lift, when the earth was carried to a spoil bank. As soon, however, as the lead in carrying earth for widening the dam became excessive, several gangs combined to supply the requisite number of carriers, and the workers made no attempt to adhere to the relay system. There was some difficulty in adjusting the proportion of carriers and diggers in the case of tank excavation where the lead was subject to frequent variation; but on the whole the work-agents and officers-in-charge soon got into the way of organizing their gangs in the most suitable manner.

System of work tasks, dependants, &c.

5. The average proportion of workers and non-workers was as follows:—

Workers—				
Intermediate	...	...	...	83
Task	..	...	...	Nil.
Non-workers	...	...	...	12
Total				100

The proportion of dependants rose from 7 per cent. in October 1899 to 17 per cent. in August 1900. The high percentage in August was due to the return of the able-bodied workers to their fields, their children being left behind in charge of some of the women to get the benefit of the Camp kitchens.

6. The standard tasks (Class I) in the district were:—

Ordinary earthwork—				Cft.
Roads	...	...	...	80
Tanks	...	...	...	100
Metal breaking—				
Basalt and granite	...	...	...	4½
Sandstone and quartz	...	...	...	6

There was some difficulty in obtaining a full task for basalt and granite breaking, as the stone varied much in hardness and workers unaccustomed to breaking metal could not do the full task at first. The earthwork tasks were easily performed.

7. The condition of the workers throughout the operations was distinctly good, with the exception perhaps of some slight deterioration amongst the carriers in the Thana and the Bhiwapur Camps in the hot weather. There was certainly no emaciation in any charge. Nursing mothers were specially taken care of and given only half task, whilst emaciated sucklings whom their mothers could not nourish were fed on milk, Mellin's food, &c. There were only three deaths from small-pox. Cholera broke out in June in the Ambajheri, Juma Talao and Bhiwapur Camps, but did not assume an epidemic form except in the Bhiwapur charge. The total number of deaths for the 11½ months from the 15th October 1899 to the 29th September 1900 was 226, of which 44 were from cholera. The average relief population being 14,870, this gives a rate of 15·2 per *mille* per annum from all causes and 12·2 excluding cholera.

The supply of food-grains was sufficient throughout; nor was there much difficulty with regard to the water-supply, except in the Thana and Bhiwapur charges on the Bhiwapur-Umrer Road, where the work was spread over long lengths of the road, necessitating the carriage of water to considerable distances. In the case of the Deolapar Camp in the hilly country to the north-east of the district, where the water-supply began to show signs of failure in January, the charge was removed to Tekadi, further south on the Great Northern Road towards Kamptee, to ensure a sufficiency of water-supply.

8. All work, except boulder collection for metal breaking and hutting for camps at the commencement of the operations, was carried out by relief Work done by famine labour. labour.

Description of work.	Total No. of day-units employed.		
Road work	...	...	3,726,482
Tanks—(Water-supply)	...	...	957,039
Other works—Miscellaneous	...	...	169,710
Total	...	...	4,853,231

The quantity and description of work done were as follows —

Roads—

New roads (total length)	...	...	...	16 miles.
Raised in Class	...	...	...	22 "
Repaired	...	...	...	36½ "
Total earthwork	...	...	...	37 lakhs of cubic feet.
„ metal collection	...	...	...	30'4 "
„ moorum	...	...	...	4'3 "
„ consolidation	...	...	...	3'4 "

Tanks (Water-supply)—

Total number	...	...	...	3
Total earthwork done	...	...	...	58'9 lakhs of cubic feet.

The value of work done at normal rates is given below :—

Road work	...	...	...	1'52 lakhs of rupees.
Water-supply	...	...	...	0'88 "
Other works	...	...	...	0'07 "
Total	...	...	...	2'47

9. The total expenditure incurred on Public Works Department works amounted to Rs. 6,17,368, thus :—

Expenditure on relief.					
		Direct Relief—			
Total expenditure on "Works" = Rs. 4,06,773.	1. Wages	...	...	...	Rs. 3,36,604
	2. Gratuitous	...	...	...	19,421
	Total	...	...	...	3,56,025
	Incidental Charges—				
	3. Items of work done by contract	...	...	...	Rs. 50,748
		4. Special establishment	...	...	39,305
		5. Other items	...	...	1,28,850
		6. Tools and Plant	...	...	42,440
		Total	...	...	2,61,343
		GRAND TOTAL	...	...	6,17,368

The expenditure on the different classes of work undertaken was as shown in the following table :—

Description of work.	Total No. of day-units relieved.	Total expenditure on works only.	Total value of work done at normal rates.
	No.	Rs.	Rs.
Road work	3,726,482	3,23,531	1,52,453
Tanks —(Water-supply)	957,039	70,008	87,874
Other works—Miscellaneous	169,710	13,234	6,617
Total	4,853,231	4,06,773	2,46,944

10. The cost of relief works out as follows, the average prices of the cheapest food-grain during the famine being 10 seers per rupee and the average wage-basis 10½ seers :—

No. of day-units relieved per rupee of expenditure on works only		...	No. 12
Do. do. including all charges		...	8
Cost per 1,000 day-units—			
Direct relief	{ Wages	...	Rs. 69'4
	{ Gratuitous	...	4'0
	Total	...	73'4
Incidental charges—			
Items of work done by contract		...	Rs. 10'5
Special establishment		...	8'1
Other items		...	26'5
Tools and Plant		...	8'7
Total		...	53'8
GRAND TOTAL		...	127'2
			Percentage. 54'6
			3'1
			57'7
			For "Works" only Rs. 83'9 or 66'0 per cent.

The average wages earned per worker-unit and the cost per unit gratuitously relieved work out as follows :—

Persons relieved.	WAGES EARNED PER WORKER AND COST PER UNIT GRATUITOUSLY RELIEVED.		ALLOWANCE PERMISSIBLE UNDER THE GENERAL ORDER.		Remarks.
	Pice.	Equivalent chhittaks of grain at 10 seers per rupee (average market price of cheapest grain).*	Chhittaks of grain.	Pice at 10½ seers per rupee (average wage-basis).†	
WORKERS.					
Class I	62	155	19	7	* This is the average price of the cheapest grain, viz., the cheapest of wheat, rice and jowar. † The average grain basis works out to be 5 per cent. lower than the average price of food-grains during the famine.
Class II	49	122	15	6	
Class III	3	75	8	3	
GRATUITOUS.					
Class IV	56	140	12	5	
Class V	18	45	4	2	

From this table it appears that workers earned 88 per cent. of the full wage in the case of Class I and 81 per cent. in the case of Class II, working children earning the full wage as they were not fined. The special diet issued to the sick, nursing mothers, weakly children, &c., accounts for the comparatively high cost of feeding the dependants.

Ratio of famine to ordinary rates.

11. The ratio of famine to ordinary Public Works Department rates works out as follows :—

	Ratio.
Works excluding gratuitous	1.57
Works including gratuitous	1.64
Total expenditure including all charges	2.57

12. With the exception of the short length of the Nagpur-Bisnur Road, the new roads constructed by famine labour, viz., Khapa-Patansaongi and Bhiwapur-Powni, are useful and will be of permanent benefit to the district. Metal has been collected on the Umrer-Bhiwapur and to some extent on the Nagpur-Kalmeshwar-Katol Road, to raise these important roads to Class I. A 4½-inch coat of metal has been consolidated on an almost continuous length of 16 miles on the former road. Large quantities of metal have also been collected on the existing Class I roads (chiefly the Great Northern and Eastern) which will reduce the cost of future maintenance.

Of the tank works undertaken, that on the Ambajheri Reservoir is of undeniable utility and of an enduring character. Not only has the storage capacity been increased by 4 million cubic feet by direct excavation, but the increased width and stability that the dam has received will admit of the weir level being raised in future, when funds permit, so as to store an additional supply and minimise the chances of another failure such as that which Nagpur has had to face in the last hot weather. The improvements that the Jumma Talao and the Telinkheri tank have received will add to their storage capacity and utility.



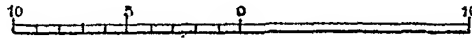
OF

NAGPUR DISTRICT

WORKING WORK DONE BY FAMINE LABOUR UNDER P.W.D.

1899 & 1900

Scale 1 Inch = 8 Miles.



NOTE

Area in Square Miles.....3,843

Population in 1891.....757,862.

REFERENCES.—	
District.....	NAGPUR
Tahsil.....	a Umrer
Town.....	a Umri
Glass I Road.....	—————
do. II.....	—————
do. III B.....	—————
do. III A.....	—————
District Boundary.....	—————
do. Tehsil.....	—————
Railway Open.....	+++++
do. projected.....	++ ++ ++

REFERENCES TO WORK DONE BY
FAMINE LABOUR

I-Railways	
(i) New Railways	
Earth-work.....	30 2.3
Ballast Collection.....	16 1.6
Do at quarries.....	○
(ii) Improvements to existing Rlys	
Earth-work.....	20 2.5
Ballast collection.....	25 3.0
Do at quarries.....	○
II-Irrigation Tanks	
Completed.....	□
Incomplete.....	□
III Road Work	
Embanked.....	25 30
Moorum.....	20 2.5
Metalled with earthen sides.....	2.5 3.0
Do. without do.....	10 1.5
New roads.....	N. R.
Raised in class.....	R. G.
Repaired.....	R. P.
Metal at road sides.....	—————
Moorum do.....	—————
Metal at quarries.....	○
Moorum do.....	○
IV-Village Tanks	
Completed.....	◇
Incomplete.....	◇
Famine Relief camps.....	①

WARDHA DISTRICT.

Relief Operations under the Public Works Department from October 1899 to October 1900.

Preparations for work-relief on a large scale were ordered on the 5th October 1899, and the first relief camp under the Public Works Department was opened at Sailu on the 21st October. The demand for relief grew rapidly and numbers rose steadily month by month from November to May, until they mounted up to 65,000, the number of charges open in May being 10. During this period there was some decrease in numbers about the middle of April on account of a sharp outbreak of cholera which lasted for nearly three weeks. Full effect could not be given to the orders contained in Famine Circular No. 49-F, dated the 7th May 1900, until the second week of July, when a rapid fall in numbers took place. Four camps were at once closed: one more was closed in August, one in September, and the remaining four by the middle of October 1900.

2. The total number of charges opened was 10, the average distance from any charge to the furthest affected village being five miles. The average and maximum daily attendance per charge were 4,700 and 9,500, respectively, or $\frac{1}{4}$ th and $\frac{1}{4}$ th of the affected population within the area served. The average and maximum attendance for the whole district were 33,337 and 65,566 (in June), respectively. Labour was chiefly employed on the construction of new and improvement of existing roads and village tanks, and collection of ballast for the Great Indian Peninsula Railway.

Altogether 11·578 million day-units were relieved on the Public Works, of whom 3·697 were men, 4·815 women and 3·066 children. The total expenditure was 13·10 lakhs of rupees, of which 8·49 lakhs of rupees on direct relief—(wages and gratuitous charges).

3. The following table exhibits the course of operations month by month:—

Month.	Num-ber of charges.	Average daily attend-ance.	Maxi-mum daily attend-ance.	Propor-tion of men, women and children	PROPORTION OF WORKERS AND DEPENDANTS.			PERCENTAGE OF WORKERS AND DEPENDANTS OVER AFFECTED POPULATION.			
					Inter-mediate.	Task.	Gratui-tous.	Inter-mediate	Task.	Gratui-tous.	Total.
October 1899 ...	2	2,256	2,978	32 42 36 Men Women Children	93·0	...	7·0	0·52	...	0·04	0·56
November „ ...	4	6,554	10,700		84·0	6·0	10·0	1·38	0·10	0·16	1·64
December „ ..	6	16,244	21,250		86·0	1·0	13·0	3·49	0·04	0·53	4·06
January 1900 ..	6	29,151	39,729		83·4	2·2	14·4	6·08	0·16	1·05	7·29
February „ ..	7	44,687	52,816		83·4	0·4	16·2	9·33	0·04	1·81	11·17
March „ ...	9	51,184	57,170		82·4	0·2	17·4	10·54	0·03	2·23	12·80
April „ ...	9	54,721	63,852		83·6	0·8	15·6	11·44	0·11	2·13	13·68
May „ ...	10	55,264	65,399		83·0	2·0	15·0	11·47	0·28	2·07	13·82
June „ ...	10	57,782	65,566		84·0	1·0	15·0	12·13	0·15	2·17	14·45
July „ ...	10	44,211	59,004		84·6	0·5	14·9	9·35	0·06	1·64	11·05
August „ ...	5	17,072	22,623		83·1	0·2	16·7	3·55	0·01	0·71	4·27
September „ ...	4	13,214	17,688		87·0	...	13·0	2·87	...	0·43	3·30
October „ ...	2	7,706	11,653		90·0	...	10·0	1·74	...	0·19	1·93
	10	33,337	65,566	...	83·8	0·9	15·3	6·98	0·07	1·28	8·33

4. No difficulty was found in organising works in accordance with the General Order. An attempt was made to introduce the relay system of carrying metal by head-loads, but it did not prove successful. The system of long leads was eventually adopted, which afforded abundance of employment for all the women and children, of whom there was an undue proportion.

Systems of work, tasks, dependants, &c. 5. The average proportion of workers and non-workers was as follows:—

Workers—				83.8
Intermediate	...	...	...	0.9
Task	...	...	...	15.3
Non-workers	...	...	...
Total	...	...	...	100.0

The proportion of dependants rose and fell with the total numbers except in the month of August, when the disappearance of most of the able-bodied caused a temporary increase in the proportion, notwithstanding the sharp decline in the total numbers.

The standard tasks were:—

Earthwork	...	...	80 to 100 cubic feet.
Metal-breaking	...	...	4½ cubic feet.

There was no difficulty in getting this task done, except in the Rohna and Nairi charges, where the stone was particularly hard and the task had to be reduced to 3½ and 4 cubic feet for Class I.

6. The condition of workers was very good throughout the operations. Nursing mothers were well looked after and given half tasks, and in cases where mothers could not nourish their babies, milk and Mellin's food was provided. Children fed in the kitchen were always in the best of condition.

The total number of deaths registered on the works from the commencement to the close of the operations was 1,052, of which 326 were due to cholera. The average relief population being 33,337, the total mortality on the works during the 12 months amounted to 31.6 per thousand from all causes and 21.8 per thousand excluding cholera.

7. With the exception of boulder collection and hutting for camps in the preparatory stage, all work was performed by relief labour:—

Description of work.	Total day-units employed.
Railway	1,070,625
Water-supply	115,185
Road work	8,942,312
Village tanks	1,255,438
Other works—Miscellaneous	194,070
Total	11,577,633

The quantity and description of work done was as follows:—

Railways—

Total ballast collection ... 6.16 lakhs of cubic feet.

Roads—

New Roads (total length) ... 36½ miles.
 Raised in Class (do.) ... 54 "
 Repaired (do.) ... 27 "
 Total earthwork ... 245.90 lakhs of cft.
 „ metal collection ... 33.71 „
 „ moorum collection ... 35.30 „
 „ consolidation ... 22.03 „

Village tanks (total number) ...

Total earthwork ... 99.64 lakhs of cft.

8. The total expenditure incurred on Public Works Department works amounted to Rs. 13,09,993, thus:—

Total expenditure on "Works" only = Rs. 9,08,760.	Direct Relief—				Rs.
	1. Wages	...	...	...	7,78,727
	2. Gratuitous	...	...	...	70,311
	Total	...	...	...	8,49,038
	Incidental Charges—				Rs.
	3. Items of work done by contract	...	...	...	59,722
	4. Special establishment	...	...	...	50,956
	5. Other items	...	...	...	2,53,656
	6. Tools and Plant	...	...	...	90,621
	Total	...	...	...	4,60,955
GRAND TOTAL					13,09,993

The expenditure* on the different classes of work undertaken was as shown in the following table :—

Description of work.				Total number of day-units relieved.	Total expenditure on workers only.	Total value of work done at normal rates.
				No.	Rs.	Rs.
Railway	...	...	...	1,070,628	87,631	30,161
Water-supply	...	...	...	115,185	10,266	5,706
Road work	...	...	...	8,942,312	6,99,665	3,26,262
Village tanks	...	...	...	1,255,438	94,380	75,461
Other items—Miscellaneous	...	...	...	194,070	16,818	10,258
Total				11,577,633	9,08,760	4,47,848

* This includes "Works" only, viz.:—(1) Wages, (2) Gratuitous, (3) Items of work done by contract.

9. The cost of relief works out as follows, the average price of food-grains during the period covered by the famine being 10½ seers per rupee, and the average wage-basis 11½ seers :—

Number of day-units relieved per rupee on expenditure on works only... 13
Do. do. total expenditure ... 9

Cost per 1,000 units—

				Rs.	Percentage.	
Direct relief ... {	Wages	...	...	67.3	59.4	Cost on, "Works", only Rs. 78.5 or 69.4 per cent.
	Gratuitous	...	...	6.1	5.4	
	Total	...	...	73.4	64.8	
Incidental charges—						
Items of work done by contract				...	5.1	4.6
Special establishment				...	4.9	4.3
Other items				...	21.9	19.4
Tools and Plant				...	7.8	6.9
Total				...	39.7	35.2
GRAND TOTAL				...	113.1	100.0

The average wages earned per worker-unit and the cost per unit gratuitously relieved work out as follows :—

Persons relieved.	WAGES EARNED PER WORKER AND COST PER UNIT GRATUITOUSLY RELIEVED,		ALLOWANCE PERMISSIBLE UNDER THE GENERAL ORDER.		Remarks.	
	Pice.	Equivalent chhittaks of grain at 10½ seers per rupee (average market price of cheapest grain) *	Chhittaks of grain.	Pice at 11½ seers per rupee (average wage-basis).†		
WORKERS.						
Class I	...	6'3	16'5	19	7	* This is the average price of the cheapest grain, viz., the cheapest of wheat, rice and juar.
Class II	...	5'0	13'1	15	5	
Class III	...	3'0	7'9	8	3	
GRATUITOUS.						
Class IV	...	4'8	12'6	12	4	† The average grain basis works out to be 10 per cent. lower than the average price of food-grains.
Class V	...	2'4	6'3	6	2	

The workers performed on the whole 90 per cent. of their tasks and earned proportionately. The grain equivalent of their earnings were 16½ and 13 chhittaks, against 19 and 15 prescribed for Classes I and II. The great care taken of the weakly and the cost of feeding them and the infants on special diet account for the comparatively high cost of gratuitous relief.

Ratio of famine to ordinary rates of work.

10. The ratio of famine to ordinary contract rates works out as follows:—

Work excluding gratuitous	...	...	...	...	...	1'87
Work including gratuitous	...	...	...	...	...	2'03
Total expenditure including all incidental charges	...	...	...	...	...	2'93

The high rates are principally due to the large quantity of metal and moorum carrying done by head-loads over long leads, which cost about five times more than the ordinary rates for carting.

11. Four new railway feeder roads which have been practically completed may be considered as of permanent utility, *viz.*, Sailu-Pownar, 9½ miles; Allipur-Sonegaon, 6 miles; Wardha-Anjni, 9 miles; Hinganghat-Pohna, 16 miles. Several important roads have also been considerably improved. Sufficient quantity of metal for a 9-inch coat has been collected for the Pulgaon-Hinganghat Road (10 miles). On the Arvi-Ashti Road, earthwork has been completed on half the length and 9-inch moorum soling collected for the whole road (16 miles). The Wardha-Deoli (7 miles) and Wardha-Waigaon (5 miles) roads have been likewise improved; and metal for future maintenance has been collected on the Pulgaon-Arvi and Wardha-Pownar roads.

Some very useful work has also been done in connection with the improvement of the head-works of the Hinganghat Water-supply Scheme.

Prosecutions and Casualties in the famine staff.

12. There were three deaths in the field staff, *viz.*, Captain T. A. Fisher, Famine Works Superintendent, one Work Agent, and one temporary Clerk. There were no criminal prosecutions.

REFERENCES	
District.....	WARDHA
Tahsil.....	Arvi
Town.....	Ashfi
Class I Road.....	
do II.....	
do III B.....	
do III A.....	
District Boundary.....	
do Tahsili.....	
Railway Open.....	+++++
do projected.....	++ ++

REFERENCES TO WORK DONE BY FAMINE LABOUR

I- Railways	
(i) New Railways	
Earth-work.....	
Ballast Collection.....	
do at quarries.....	
(ii) Improvements to existing Rlys	
Earth-work.....	
Ballast collection.....	
do at quarries.....	
II- Irrigation Tanks	
Completed.....	
Incomplete.....	
III- Road work	
Embanked.....	
Moorumed.....	
Metalled with earthen sides.....	
do without do.....	
New roads.....	N. R.
Raised in class.....	R. C.
Repaired.....	R. P.
Metalled at road sides.....	
Moorum do.....	
Metalled at quarries.....	
Moorum do.....	
IV- Village Tanks	
Completed.....	
Incomplete.....	
Famine Camps.....	

CHANDA DISTRICT.

Relief Operations under the Public Works Department from October 1899 to October 1900.

Four relief camps were simultaneously opened in this district on the 15th October 1899 after three weeks' notice from the Civil Department. The immediate influx of workers necessitated the organisation of five more charges in rapid succession in November. By the 5th of December 10 charges were open, the average attendance having risen to 66,000 from about 18,000 in October. There was a sharp decline in numbers from the middle of December to the middle of March, due among other causes to the stiffening of tasks and stoppage of the Sunday wage. The numbers then went up again by leaps and bounds until the last week of May, when upwards of one lakh were in receipt of work-relief, the total number of charges open being 16. A severe outbreak of cholera at this time at once affected the attendance, which in three weeks fell from an average of 93,000 to below 58,000. The attendance rose again in June immediately the cholera was suppressed; but the orders contained in Famine Circular No. F-49, dated the 7th May 1900, now came into operation, and as numbers fell rapidly from the beginning of July the Public Works were gradually contracted until they came to an end on the 27th October 1900. Six camps were closed in July, three in August, two in September and the remainder in October.

2. The total number of charges opened was 16, the average distance from any charge to the furthest affected village being 13 miles. The average daily attendance per charge was 4,429 or 1 out of every 10 of the affected population residing within the area served, the maximum being 20,599 or 1 out of every 3. The average attendance for the whole district was 45,102; and the maximum attendance on any one day was 109,531 (May 1900).

The total number of day-units relieved from the commencement to the close of operations was 16·288 millions, of which 5·277 were men, 7·084 women, 3·927 children. The total expenditure including all charges amounted to 18·62 lakhs of rupees, of which 12·70 lakhs were spent on direct relief, *vis.*, wages and gratuitous alone. Labour was chiefly employed on the construction of new roads, raising existing roads in class, and provision of reserve metal for future maintenance and also in repairing, deepening and improving village tanks.

3. The following table exhibits the particulars of attendance on the works from their commencement to close:—

Months.	Number of charges.	Average daily attendance.	Maximum daily attendance.	Proportion of men, women and children.	PROPORTION OF WORKERS AND DEPENDANTS.			PERCENTAGE OF WORKERS AND DEPENDANTS OVER AFFECTED POPULATION.			
					Inter-mediate.	Task.	Gratui-tous.	Inter-mediate.	Task.	Gratui-tous.	Total.
October 1899 ...	4	17,787	34,469	<div style="display: flex; flex-direction: column; align-items: center;"> <div>32</div> <div>44</div> <div>24</div> <div>Men</div> <div>Women</div> <div>Children</div> </div>	92·70	0·40	6·90	2·58	0·01	0·19	2·78
November „ ...	8	36,540	65,554		89·40	0·30	10·30	5·10	0·02	0·59	5·71
December „ ...	10	66,008	76,799		88·50	0·10	11·40	9·13	0·01	1·17	10·31
January 1900 ...	12	57,997	73,812		86·00	0·10	13·90	7·79	0·01	1·26	9·06
February „ ...	12	41,468	56,225		83·13	0·01	16·86	5·38	0·01	1·09	6·48
March „ ...	12	39,252	54,625		83·00	...	17·00	4·67	...	0·96	5·63
April „ ...	13	58,715	81,251		85·20	0·03	14·77	7·18	...	1·24	8·42
May „ ...	16	93,239	109,531		86·00	1·00	13·00	11·51	0·13	1·74	13·38
June „ ...	16	57,644	97,038		85·04	0·38	13·58	7·12	0·03	1·12	8·27
July „ ...	10	49,455	76,097		87·00	0·20	12·80	6·17	0·02	0·91	7·10
August „ ...	7	25,631	43,212		84·57	0·05	15·38	3·11	0·01	0·56	3·68
September „ ...	5	12,973	24,841		81·00	...	19·00	1·51	...	0·35	1·86
October „ ...	2	7,061	13,655		83·00	...	17·00	0·84	...	0·17	1·01
	16	45,102	109,531		86·01	0·28	13·71	5·56	0·02	0·92	6·70

4. Considerable difficulty was experienced in the earlier stages in meeting the rapid growth of numbers on the works. At Armori, for instance, the daily average rose for a time to 20,000 (in December) and the charge had to be immediately broken up, the reserve Officer-in-charge taking over one-half the numbers. The organisation of carriers' gangs on the relay system was also a task of difficulty, only one charge (Kothari), where the Work Agents were exceptionally good, really succeeding in giving full effect to the system. The undue proportion of women and children was another source of trouble; but on the whole a fair proportion of diggers to carriers was maintained, the long leads for carriage of metal, moorum, &c., helping largely in the proper distribution of the several classes of workers.

5. The average proportion of workers and non-workers was as follows:—

				Per cent.
Workers—				
Intermediate	...	...	...	86.01
Task	...	...	...	0.28
Non-workers	...	...	...	13.71
			Total	100.00

For a few weeks in October and November some task-work gangs were formed, but this was soon stopped. Later on in April and May special nursing mothers' gangs were formed, but workers of this class were afterwards allowed to remain in the ordinary intermediate gangs with only half the usual tasks. This was found more suitable, as such women objected to being separated from their husbands and relatives.

The proportion of dependants rose with the total numbers (*vide* table in paragraph 3), chiefly because of the large number of new-comers fed in the kitchen, before becoming entitled to their first daily wage, not being discriminated from the dependants in the returns. And again when the numbers decreased in consequence of the departure of the able-bodied, the children left behind swelled the proportion of the dependants on the works.

6. The standard tasks in the district were:—

Earthwork	...	...	...	80 to 100 cubic feet.
Metal (basalt)	...	...	...	4½ (C. I.)
Sandstone and quartz	...	...	...	7½ to 6 (C. I.)

There was some difficulty in exacting a full task in metal breaking, especially from new-comers, and in several instances workers showed absolute-indifference to earning a full wage in the first few months of the operations.

Later on there was much less difficulty in obtaining a full task; but at no stage was the failure to complete a full task attributable to the poor condition of the workers. In some cases where an exceptionally hard quality of stone had to be broken, the task was proportionately reduced. Thus in the case of the Garchiroli Charge for some time the task for metal-breaking was fixed at 3 (C. I.) and 2 (C. II.), and at Warora 3 (C. I.) and 1½ (C. II.)

7. The condition of the workers was very good until the end of May, when there was a sharp outbreak of cholera when numbers left the works. The people on their return after the panic was over showed signs of deterioration in condition.

The difficulty in the supply of drinking water was acute throughout almost the whole district, but was successfully overcome. The supply of water constituted a very heavy item of expenditure as it had to be carried long distances, in some instances as much as 6 to 8 miles.

The food supplies were on the whole sufficient. On the burst of the monsoon much difficulty was experienced in the provisioning of charges to the east and north-east of the district; but this also was overcome by vigorous effort.

Nursing mothers received special attention, and sucklings who could not be properly nourished by their mothers were supplied with milk and Mellin's food, &c., both in the hospital and on the works.

The total number of deaths registered on the Public Works Department works was 2,508, of which 1,152 were due to cholera. The average relief population being 45,102, the total mortality on the works during the 12 months was 55.6 per thousand from all causes, and 30 excluding cholera.

Work done by famine labour. 8. Relief labour was principally employed on the construction of new, and improvement of existing, roads and village tanks :—

Description of works.	Total day-units employed.
Ballast collection for railway ...	18,343
Road work ..	15,301,048
Village tanks ...	968,993
Total ...	<u>16,288,384</u>

The quantity and description of work done were as follows :—

Railways—

Total ballast collection ... 0 15 lakhs of cubic feet.

Roads—

New roads (total length) ... 131 miles.
 Roads raised in Class ... 141½ "
 Repaired ... 31 "
 Total earthwork ... 385·16 lakhs of cubic feet.
 „ metal collection ... 44·78 "
 „ moorum „ ... 84·32 "
 „ consolidation ... 46·79 "

Village Tanks (Total number) ... 31

Total earthwork ... 96·27 lakhs of cubic feet.

Total expenditure. 9. The total expenditure incurred on Public Works Department work was Rs. 18,62,177, thus :—

				Rs.
Expenditure on "Works" = Rs. 13,29,579.	<i>Direct Relief—</i>			
	1. Wages	...	...	11,70,785
	2. Gratuitous	...	...	99,429
			Total	<u>12,70,214</u>
	<i>Incidental Charges—</i>			
	3. Items of work done by contract	...		59,365
	4. Special establishment	...		1,03,739
	5. Other items	...		3,01,463
	6. Tools and Plant	...		1,27,396
			Total	<u>5,91,963</u>
			GRAND TOTAL	<u>18,62,177</u>

The expenditure* by classes of work was as given below :—

Description of work.				Total number of day-units relieved.	Total expenditure on works only.	Total value of work done at normal rates.
				No.	Rs.	Rs.
Railways	...	...	...	18,343	1,832	879
Roads	...	...	...	15,301,048	12,42,980	5,79,074
Tanks	...	...	...	968,993	78,619	65,198
Miscellaneous	...	...	...	...	6,148	6,148
Total				16,288,384	13,29,579	6,51,299

* This includes "Works" only, viz. :—(1) Wages, (2) Gratuitous, (3) Items of work done by Contract.

10. The cost of relief works out as follows, the average of the cheapest price of food-grain during the famine being 9½ seers per rupee and the average wage-basis 10 seers :—

Number of day-units relieved per rupee of expenditure on "Works" only				No.
Do.	do.	total expenditure	...	12
Do.	do.	total expenditure	...	9
Cost per 1,000 day-units—				Percentage.
Direct relief	Wages	...	719	62.9
	Gratuitous	...	61	5.3
Total			780	68.2
Incidental charges—				
Items of work done by contract			36	3.2
Special establishment			64	5.6
Other items			185	16.2
Tools and Plant			73	6.8
Total			358	31.5
GRAND TOTAL			1143	100.00

The average wages earned per worker-unit and the cost per unit gratuitously relieved works out as follows :—

WORKS OUT AS FOLLOWS :

Persons relieved.	WAGES EARNED PER WORKER AND COST PER UNIT GRATUITOUSLY RELIEVED.		ALLOWANCE PERMISSIBLE UNDER THE GENERAL ORDER.		Remarks.
	Piec.	Equivalent chhittaks of grain at 9½ seers per rupee (average market price of the cheapest grain).*	Chhittaks of grain.	Piec at 10 seers per rupee (average wage basis). †	
WORKERS.					
Class I	66	15.7	19	8	* This is the average of the cheapest grain, viz. cheapest of wheat, rice and jowar.
Class II	52	12.4	15	6	
Class III	30	7.1	8	3	
GRATUITOUS.					
Class IV	52	12.4	12	5	† This is the average wage- basis for the whole period of operations.
Class V	26	6.2	6	3	

The workers earned 80 to 90 per cent. of the prescribed wages, the grain equivalents of the earnings being 15 to 16 chhittaks for Class I and 12 to 13 for Class II against the standard of 19 and 15 respectively.

Ratio of famine to ordinary rates of work.

11. The ratio of famine to ordinary Public Works Department rates is as shown below :—

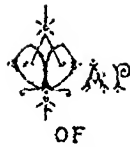
	Ratio.
Works excluding gratuitous	...
Do. including do.	1.89
Total expenditure including all incidental charges	2.04
	2.86

The high rates are due chiefly to the carriage of metal and moorum by head-loads, which cost five times as much as the ordinary rates for carting.

12. The metal collected for existing Class I roads and on the Class II roads which Permanence and utility are to be raised to Class I will be all useful. Of the newly constructed roads the Warora-Chimur (33 miles), Brahmapuri-Armori-Garchioli (34 miles) and Dhanora-Muramgaon (14 miles) will be of permanent use. The shorter lengths of road such as the Mul-Chamursi and Brahmapuri-Gewardha will be of use when completed. All the tank repairs and improvements are of permanent utility.

Casualties and Prosecutions.

13. There were two deaths in the field staff, viz., one Officer-in-charge and one Overseer. There was no criminal prosecution.

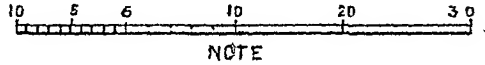


OF HANDA DISTRICT

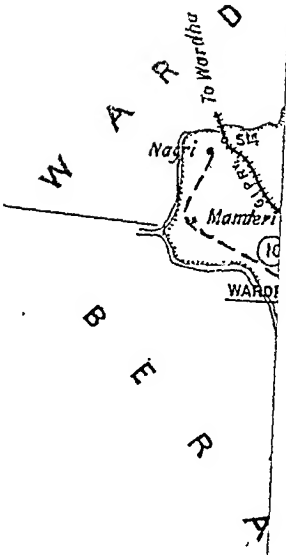
WORK DONE BY FAMINE LABOUR UNDER P.W.D.

1899 & 1900

Scale 1 Inch = 16 Miles



Area in Square Miles.....10749
Population in 1891.....697610



REFERENCES.

District.....	COHANDA
Tahsil.....	Mul
Town.....	Nimbala
Class I Road.....	—————
do II.....	—————
do IIIA.....	—————
do IIIB.....	—————
District Boundary.....	—————
do: Tehsili.....	—————
Railway Open.....	++++++
do projected.....	++++++

REFERENCES TO WORK DONE BY FAMINE LABOUR

I- Railways	
(i) New Railways	
Earthwork.....	30 25
Ballast Collection.....	25 30
Do. at quarries.....	○
(ii) Improvements to existing Rlys.	
Earthwork.....	20 25
Ballast collection.....	15 20
Do. at quarries.....	○
II- Irrigation Tanks	
Completed.....	□
Incomplete.....	□
III Road Work	
Embanked.....	25 30
Moorum.....	20 25
Metalled with earthen sides.....	15 20
Do. without do.....	10 15
New roads.....	N. R.
Raised in class.....	R. C.
Repaired.....	R. P.
Met at road sides.....	—————
Moorum do.....	—————
Met at quarries.....	○
Moorum do.....	○
IV- Village Tanks	
Completed.....	◇
Incomplete.....	◇
Famine Relief camps.....	①

BHANDARA DISTRICT.

Relief Operations under the Public Works Department from October 1899 to October 1900.

Orders were issued about the middle of September 1899 for opening four relief works in this district by the middle of October. All four works were simultaneously opened on the 15th October. Eight more camps were subsequently opened in the following order:—

November	...	...	...	3
December	...	...	...	1
February	...	...	...	2
March	...	...	...	2
				8

Numbers increased steadily month by month until the highest point was reached on the 15th March, when 80,000 were in receipt of work-relief. Camp No. 5 (Korumbi quarry) was closed on the 11th May for drafting workers to Nagpur for employment on tank improvements. Prompt effect was given to the policy enjoined in Famine Circular No. F-49, dated the 7th May 1900, and the numbers fell rapidly from May 1900. Two camps were closed in July, four in August, two in September, and the remaining three by the 15th of October, when the operations came to a close.

2. The total number of charges opened was 12, the average distance from any charge to the furthest affected village being 16 miles. The average daily attendance per charge was 5,470, *i. e.*, 1 out of every 11 of the affected population residing within the area served, the maximum being 11,143 or nearly 1 out of every 7. The average attendance for the whole district was 47,481; and the maximum attendance on any one day 80,781 (February 1900). The total number of day-units relieved from the commencement to the close of operations was 16,318 millions of day-units, of which 5,802 millions were men, 6,592 women and 3,924 children. The total expenditure including all charges amounted to 14'30 lakhs of rupees, of which 11'60 were spent on direct relief, *viz.*, wages and gratuitous relief.

3. The progress of operations from their commencement to close is exhibited in the subjoined table:—

Months.	Number of charges.	Average daily attendance.	Maximum daily attendance.	Proportion of men, women and children.	PROPORTION OF WORKERS AND DEPENDANTS.			PERCENTAGE OF WORKERS AND DEPENDANTS OVER AFFECTED POPULATION.			
					Inter-mediate.	Task.	Gratuitous.	Inter-mediate.	Task.	Gratuitous.	Total.
October 1899	...	4	11,442	15,117	93'01	'58	6'41	1'43	'10	'01	1'54
November "	...	6	24,888	39,762	90'03	1'25	8'72	3'02	'04	'29	3'35
December "	...	8	48,229	58,879	90'24	'43	9'33	5'87	'02	'61	6'50
January 1900	...	8	65,185	73,277	89'87	...	10'13	7'90	...	'89	8'79
February "	...	10	77,712	80,781	89'66	...	10'34	9'39	...	1'08	10'47
March "	...	12	71,501	79,773	90'27	...	9'73	8'70	...	'94	9'64
April "	...	12	70,668	74,383	89'70	'02	10'28	8'47	...	'97	9'44
May "	...	11	62,059	68,028	88'78	'12	11'10	7'43	...	'93	8'36
June "	...	11	51,025	56,696	88'61	'06	11'33	6'10	...	'78	6'88
July "	...	10	44,105	57,360	89'30	...	10'70	5'31	...	'63	5'94
August "	...	7	23,828	33,340	88'39	...	11'61	2'84	...	'37	3'21
September "	...	5	13,420	17,498	90'50	...	9'50	1'64	...	'17	1'81
October "	...	2	6,294	7,775	88'68	...	11'32	'75	...	'10	'85
					89'62	'11	10'27	5'73	'01	'66	6'40

4. The only difficulty in the way of good organisation of works, which was common to nearly all districts, was the incompetency of the temporary subordinate staff available.

System of work, tasks, dependants, &c.

5. The average proportion of workers and non-workers was as follows :—

Workers—

Intermediate	...	...	...	89'62
Task	...	...	...	0'11
Non-workers	...	...	...	10'27
			Total	100'00

The tasks exacted (Class I workers) were as follows :—

			Highest task. Cft.	Lowest task. Cft.
Metal-breaking—				
Black stone	...	...	4½	3
White quartz	...	...	8	6
Rubble quarrying	...	...	25	15

(No special wage was paid for quarrying as no blasting was required.)

Metal, rubble and moorum were all carried by head-loads on the chain system, which, after considerable trouble, was successfully introduced throughout the works in this district.

In all cases the lowest task was first exacted ; it was gradually raised as workers got accustomed to their work.

6. The condition of workers was on the whole good throughout. The condition of the working children was not always satisfactory owing to their parents appropriating their wages and often under-feeding them.

The total mortality on the Public Works Department works amounted to 556, of which 139 were due to cholera ; the rate per *mille* being 11·8 from all causes, and 8·9 excluding cholera.

Work done by famine labour.

7. Practically all work, including the collection of rubble for metal-breaking, hutting, &c., was carried out by famine labour :—

Description of work.	Total day-units employed.
Railways	344,958
Road works	15,751,665
Village tanks	221,658
Total	16,318,281

The quantity and description of work done were as follows :—

Railways—

Total length	...	7 miles.
Total earthwork	...	12'22 lakhs of cubic feet.
Ballast collection	...	3'41 "

Roads—

New roads (total length)	...	49 miles.
Raised in Class (total length)	...	23 "
Repaired (" ")	...	77 "
Total earthwork	...	134'13 lakhs of cubic feet.
" metal collection	...	82'14 "
" moorum "	...	32'67 "
" consolidation	...	15'88 "

Village tanks

Total earthwork	...	No. 10
	...	34'96 lakhs of cubic feet.

Total expenditure.

8. The total expenditure incurred on Public Works Department works amounted to Rs. 14,29,749, thus :—

Total expenditure on "Works" Rs. 11,93,928.	<i>Direct Relief—</i>				Rs.
	1. Wages	...	...	...	10,93,422
	2. Gratuitous	...	...	...	66,239
				Total	11,59,661
	<i>Incidental Charges—</i>				
	3. Items of work done by contract	...	...	...	34,267
	4. Special establishment	...	...	...	96,319
	5. Other items	...	...	...	54,568
	6. Tools and Plant	...	...	...	84,934
				Total	2,70,088
				GRAND TOTAL	14,29,749

The expenditure* on the different classes of work was as follows :—

Description of work.				Total No. of day-units relieved.	Total expenditure on works only.	Total value of work done at normal rates.
				No.	Rs.	Rs.
Railways	...	...	...	344 958	24,168	16,145
Road work	...	...	...	15,751,665	11,52,993	4,46,283
Village tanks	...	...	...	221,658	16,767	17,501
Total				16,318,281	11,93,928	4,79,929

*This includes "Works" only, viz. :—(1) Wages, (2) Gratuitous, (3) Items of work done by Contract.

Cost of relief and wages earned by relief-workers.

9. The cost of relief works out as follows, the average price of food-grains and the average wage-basis being $9\frac{1}{2}$ and $10\frac{1}{2}$ seers per rupee, respectively :—

	No.
Number of day-units relieved per rupee of expenditure on works only	14
Do. do. total expenditure	11

Cost per 1,000 day-units—

				Rs.	Percentage.
Direct relief	Wages	...	...	67'00	76'47
	Gratuitous	...	...	4'06	4'63
	Total	...	...	71'06	81'10
Incidental charges—					
	Items of work done by contract	...	...	2'10	2'40
	Special establishment	...	...	5'90	6'73
	Other items	...	...	3'35	3'82
	Tools and Plant	...	...	5'21	5'95
	Total	...	...	16'56	18'90
	GRAND TOTAL	...	...	87'62	100'00

Cost-on "Works,"
73'16 Rs. or
83'50 per cent.

The average wages earned per worker-unit and the cost per unit gratuitously relieved work out as follows :—

Persons relieved.	WAGES EARNED PER WORKER AND COST PER UNIT GRATUITOUSLY RELIEVED.		ALLOWANCE PERMISSIBLE UNDER THE GENERAL ORDER.		Remarks.
	Pice.	Equivalent chhittaks of grain at 10½ seers per rupee (average market price of cheapest grain).*	Chhittaks of grain.	Pice at 10½ seers per rupee (average wage-basis).†	
WORKERS.					
Class I	...	59	14'1	19	7
Class II	...	4'7	11'2	15	6
Class III	...	3'0	7'1	8	3
GRATUITOUS.					
Class IV	...	4'8	11'4	12	5
Class V	...	2'4	5'7	6	3

* This is the average price of the cheapest grain, viz., the cheapest of wheat and rice.

† The average wage-basis works out to 10 per cent. lower than the average market price of the cheapest grain.

From the above table it would appear that the workers performed sufficient work to earn 85 per cent. of the wages authorised by the General Order. The slightly less average cost in the case of the dependants points to economy in feeding large numbers of people together.

Ratio of famine to ordinary rates of work.

10. The ratio of famine to normal rates of work stands thus :—

	Ratio.
Works excluding gratuitous	2'35
Works including gratuitous	2'48
Total expenditure including all incidental charges	2'97

11. The Deputy Commissioner, Bhandara, in his letter No. 4005, dated the 16th November 1900, to the Commissioner, Nagpur Division, states that all the works carried out are of utility, more especially the Kardha-Powni Road, which will, if completed, enable grain to be carried into Chanda, if necessary. Next in utility he mentions the Tumsar-Mohari Road and the Tirora-Kairlanji Road. The Deputy Commissioner, Bhandara, also states as regards metal collection along existing roads that "its utility is undeniable."

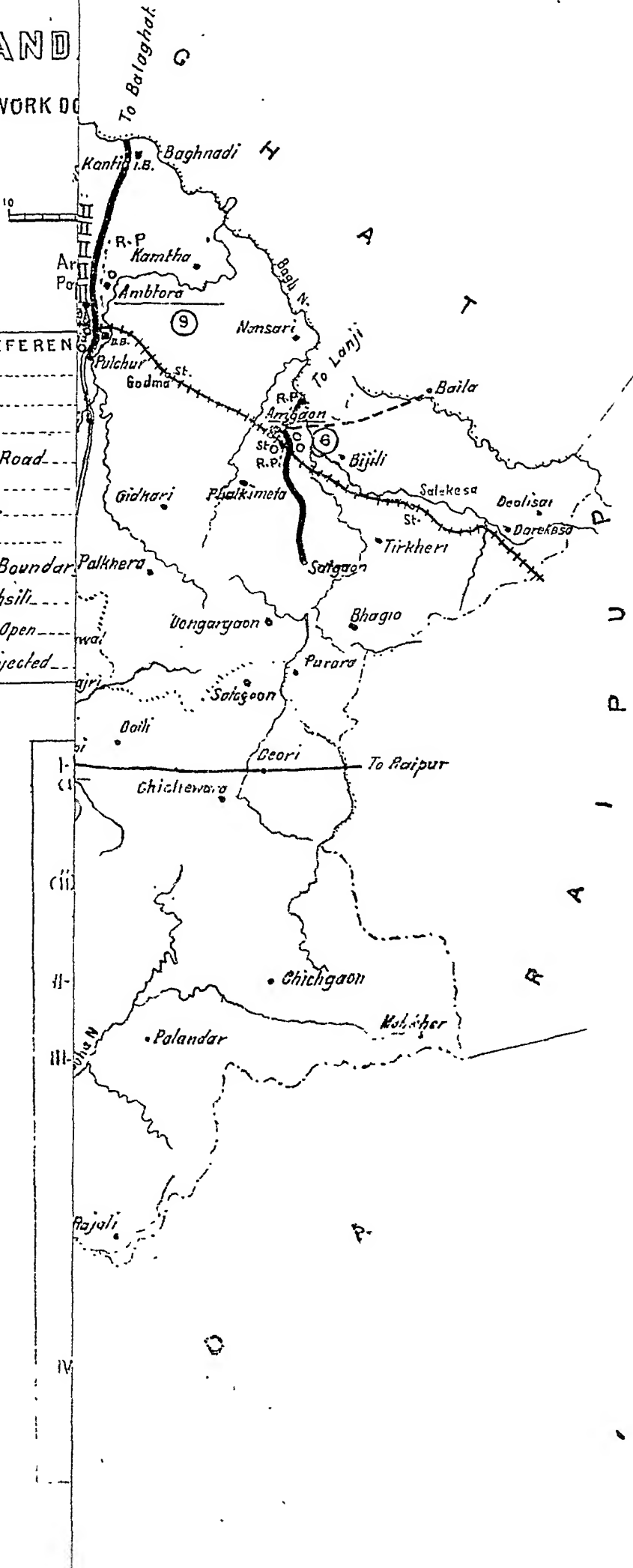
The earthwork on the Satpura Railway lying within the district has, as far as marked out by the Railway Engineers, been completed and ballast collected. Nine useful village tanks have been repaired and improved, the most important being the Sonda tank.

12. The following casualties occurred among the famine officials :—Mr. Flanagan, Officer-in-charge of Korumbi Camp No. 5; Mr. Narainswamy Naidu, Travelling Inspector of Accounts. There were altogether 17 prosecutions in this district. The majority of those committed to trial have been discharged for want of adequate proof; a few have been convicted, and the remainder are still under trial.

BHAND

SHOWING WORK DO

REFEREN	
District	-----
Tahsil	-----
Town	-----
Class I Road	-----
do II	-----
do III B	-----
do III A	-----
District Boundar	-----
do Tehsil	-----
Railway Open	-----
do: projected	-----



BALAGHAT DISTRICT.

Relief Operations under the Public Works Department from October 1899 to October 1900.

Warning was received on the 15th September 1899 that six camps would be required in this district by the 15th of the following month. All the six camps were opened on the specified date. One of these was, however, closed very shortly, as it failed to attract workers on the Baihar plateau. The attendance on the remaining camps was large, and the numbers grew rapidly until 10 camps in all were opened by the middle of March 1900, when upwards of 64,000 were in receipt of relief on the works. The exodus from the works commenced early in April, and Camp No. 7 (Lalbarra) was closed in May as soon as the railway work was over. Four more camps were closed by the end of July, when only five out of 11 remained open. The remaining charges were gradually wound up in September and October, until all works ceased in this district on the 20th October 1900.

2. The total number of charges opened was 11, the average and maximum distance of the furthest affected village from any camp being 15 and 30 miles respectively. The average daily attendance per charge was 5,063, *i. e.*, one out of every seven of the affected population residing within the area served; the maximum being 11,520 or nearly one out of every three. The average attendance for the whole district was 38,818, and the maximum 64,425.

Labour was principally employed in constructing the Satpura Railway, making new roads, and on metal collection for existing roads and repairs and improvements of village tanks.

The total number of day-units relieved from the commencement to the close of operations was 13,253 millions, of which 4,541 were men, 5,539 women and 3,173 children. The total expenditure, including all charges, amounted to 12.17 lakhs of rupees, of which 9.87 lakhs were spent on direct relief, *viz.*, wages and gratuitous alone.

3. The following table shows at a glance the progress of operations month by month :—

Month.	Number of charges.	Average daily attendance.	Maximum daily attendance.	Proportion of men, women and children.	PROPORTION OF WORKERS AND DEPENDANTS.			PERCENTAGE OF WORKERS AND DEPENDANTS OVER AFFECTED POPULATION.			
					Inter-mediate.	Task.	Gratuitous.	Inter-mediate.	Task.	Gratuitous.	Total.
October 1899 ...	6	16,684	21,662	<div style="display: flex; justify-content: space-around; align-items: center;"> <div style="writing-mode: vertical-rl; transform: rotate(180deg);">Men</div> <div style="writing-mode: vertical-rl; transform: rotate(180deg);">Women</div> <div style="writing-mode: vertical-rl; transform: rotate(180deg);">Children</div> </div>	97.38	...	2.62	4.25	...	0.11	4.36
November „ ...	6	24,784	30,324		96.33	...	3.67	6.23	...	0.24	6.47
December „ ...	7	39,646	43,384		93.97	...	6.03	9.73	...	0.62	10.35
January 1900 ...	8	55,798	61,889		91.47	...	8.53	13.33	...	1.24	14.57
February „ ...	9	62,120	64,425		89.83	...	10.17	14.57	...	1.65	16.22
March „ ...	10	56,061	64,363		88.22	0.07	11.71	12.92	0.01	1.71	14.64
April „ ...	10	56,735	58,508		87.72	0.58	11.70	12.99	0.09	1.73	14.81
May „ ...	10	53,761	53,761		88.33	0.61	11.06	12.40	0.09	1.55	14.04
June „ ...	8	43,259	50,123		89.07	0.39	10.54	10.06	0.04	1.19	11.29
July „ ...	7	22,205	31,872		89.82	0.77	9.41	5.21	0.04	0.55	5.80
August „ ...	5	12,191	13,720		91.98	0.03	7.99	2.93	...	0.25	3.18
September „ ...	4	13,325	13,686		93.46	...	6.54	3.25	...	0.23	3.48
October „ ...	2	9,248	10,840		92.78	...	7.22	2.24	...	0.17	2.41
	11	38,818	64,425	...	90.37	0.23	9.40	9.17	0.02	0.95	10.14

4. At the outset camps were inclined to be overcrowded, but this was quickly remedied by starting new camps and drafting. With this exception no embarrassment arose in the organisation of works in the district.

System of work, tasks, dependants, &c.

5. The average proportion of workers and non-workers was as follows:—

Workers—				
Intermediate	...	...	...	90.37
Task	...	...	...	0.23
Non-workers	...	...	...	9.40
Total				100.00

The tasks exacted are given below:—

Earthwork	...	...	...	100 cubic feet.
Moorum quarrying	...	...	...	65 "
Rubble	...	...	...	20 "
Metal-breaking—				
Basalt	...	...	...	4½ "
Quartz	...	...	...	6 "

Tasks in every instance were gradually enhanced so as to insure the labourers to the works on which they were employed. Metal and moorum were carried by head-loads on the chain system. There was considerable difficulty at first, but by careful direction and insistence the staff soon understood the method and carried it out with intelligence and economy.

6. The condition of the workers rather improved than otherwise as they continued on work. Signs of emaciation were apparent only among the working children, who received payment in cash which their parents appropriated and appeared to be under-fed by them.

There were also a few isolated cases of emaciated adults who were looked after in the camp hospitals till they were able to work.

The total mortality in the camps was 542 composed as follows:—

Deaths from cholera	...	...	...	123
Do. of infants-in-arms	...	...	...	90
Do. by accidents	...	...	...	16
Do. of adults from other causes	...	...	...	313

The average daily attendance being 38,818, the death-rate per thousand from all causes was 13.96 and 10.8 excluding cholera.

7. With the exception of the construction of camp huts, all works were done by famine labour. The number of day-units employed on each class of work is shown below:—

Description of work.	Total day-units employed.			
Railways	3,765,508
Road work	9,429,863
Village tanks	57,811
Total	13,253,182

The quantity and description of work done were as follows:—

Railways—

Length	...	...	...	...	47½ miles.
Total earthwork	...	...	...	...	180.48 lakhs of cubic feet.
„ ballast collection	...	...	...	...	15.29 "

Roads—

New roads (total length)	...	...	...	...	37 miles.
Raised in Class	...	...	...	...	59 "
Repaired	...	...	...	...	11 "
Total earthwork	...	...	...	...	166.26 lakhs of cubic feet.
„ metal collection	...	...	...	...	33.63 "
„ moorum collection	...	...	...	...	49.39 "
„ consolidation	...	...	...	...	27.15 "

Village tanks—

Total number	...	...	...	...	7
„ earthwork	...	...	...	...	7.23 lakhs of cubic feet.

Expenditure on relief.

8. The total expenditure incurred on Public Works Department works amounted to Rs. 12,17,366, thus :—

<i>Direct Relief—</i>					Rs.
Expenditure on "Works" → Rs. 10,28,939.	1. Wages	...	...	...	9,46,687
	2. Gratuitous	...	...	...	41,190
	Total	...	...	...	9,87,877
<i>Incidental Charges—</i>					Rs.
	3. Items of work done by contract	...	...	...	41,062
	4. Special establishment	...	...	...	1,07,058
	5. Other items	...	...	...	40,697
	6. Tools and Plant	...	...	...	40,672
	Total	...	...	...	2,29,489
GRAND TOTAL					12,17,366

The expenditure* on the various classes of work undertaken was as shown in the following table :—

Description of work.				Total No. of day-units employed.	Total expenditure on works only.	Total value of work done at normal rates.
				No.	Rs.	Rs.
Railways	...	...	...	37,65,508	2,87,943	1,63,896
Road works	...	...	..	94,29,863	7,36,475	2,88,217
Village tanks	...	..	...	57,811	4,521	3,470
Total				1,32,53,182	10,28,939	4,55,583

* This includes "Works" only, viz. :—(1) Wages, (2) Gratuitous (3) Items of work done by Contract.

9. The cost of relief was as follows, the average price of the cheapest food-grain during the famine was $9\frac{1}{2}$ seers per rupee, and the average wage-basis earned by relief workers. $10\frac{1}{2}$ seers :—

No. of day-units relieved per rupee of expenditure on works only					...	13
Do. do. total expenditure					...	11
<i>Cost per 1,000 day-units—</i>						
					Rs.	Percentage.
Direct relief	{	Wages	...	...	71'43	77'76
		Gratuitous	...	...	3'11	3'39
			Total	...	74'54	81'15	Cost on "Works" = 77'64 or 84'52 per cent.
<i>Incidental charges—</i>						
		Items of work done by contract	...	...	3'10	3'37
		Special establishment	...	...	8'08	8'80
		Other items	...	..	3'07	3'34
		Tools and Plant	...	..	3'07	3'34
		Total	...	...	17'32	18'85
		GRAND TOTAL	...	...	91'86	100'00

Cost on
"Works"
= 77'64 or
84'52
per cent.

The average wages earned per worker-unit and the cost per unit gratuitously relieved work out as follows:—

Persons relieved.	WAGES EARNED PER WORKER AND COST PER UNIT GRATUITOUSLY RELIEVED.		ALLOWANCE PERMISSIBLE UNDER THE GENERAL ORDER.		Remarks.
	Pice.	Equivalent chhittaks of grain at 9½ seers per rupee (average market price of cheapest grain).*	Chhittaks of grain.	Pice at 10½ seers per rupee (average wage-basis).†	
WORKERS.					
Class I	6'5	15'4	19	7	* This is the average price of the cheapest grain, viz., the cheapest of wheat, rice and juar.
Class II	5'1	12'1	15	6	
Class III	3'0	7'1	8	3	
GRATUITOUS.					
Class IV	6'0	14'1	12	5	† The average wage-basis works out 10 per cent. less than the average price of the cheapest food-grain.
Class V	2'0	4'7	4	2	

According to the above table the workers earned about 90 per cent. of the wages permissible under the General Order. The dependants cost more than was contemplated by the General Order, owing to the expenses incurred in feeding the sick and the emaciated babies.

Ratio of famine to ordinary rates.

10. The ratio of famine to ordinary rates of work works out as follows:—

	Ratio.
Works excluding gratuitous ... ..	... 2'17
Works including gratuitous ... ..	... 2'26
Total expenditure including all charges ... ..	... 2'67

11. The works carried out by relief labour are all permanent and of distinct utility.

Permanence and utility of works.

Over 47 miles of the Satpura Railway have been embanked and large quantities of ballast have been collected all along the line. Several new roads aggregating 37 miles in length have been constructed, the most important ones being the Lalbarra-Somnapur Railway feeder (7 miles), Kirnapur-Rajagaon (7 miles), Katangi to Seoni border (5 miles) and Waraseoni-Katangi (9 miles). These have all been banked and surfaced with moorum. Considerable quantities of metal and moorum have been collected on the Gondia-Balaghat and Rampailli-Waraseoni roads which will reduce the cost of future maintenance, and also on several important roads which will facilitate their being raised in class in the future. Seven useful village tanks have been repaired and improved.

12. There were altogether 11 prosecutions, of which several were for petty offences.

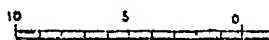
Prosecutions and Casualties. One cashier was sentenced to imprisonment, but was acquitted on appeal. Four persons were let off with a small fine and three were discharged for want of sufficient evidence. Three prosecutions were eventually withdrawn. There were no deaths among the famine officials.

BALAGHAT

SHOWING WORK DONE BY FAMINE LABOUR

1899 & 1900

Scale 1 Inch = 5 Miles



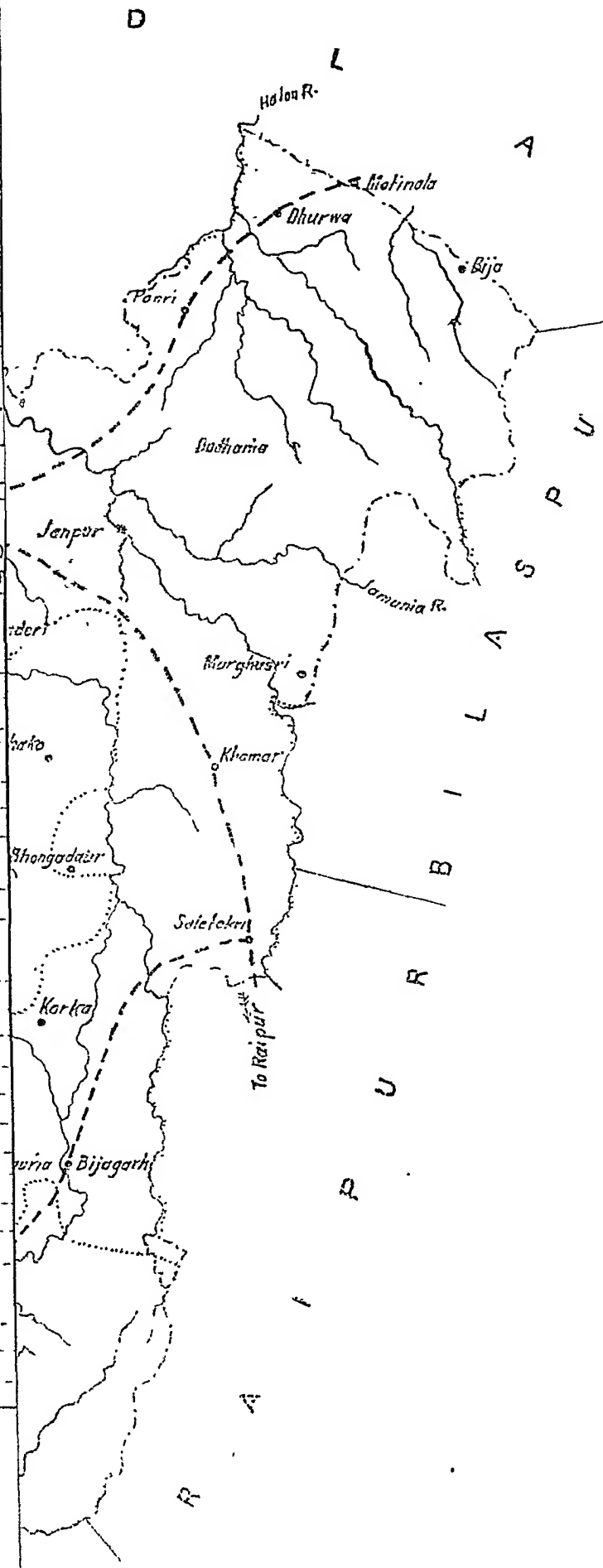
NOTE

Area in Square Miles
Population in 1891

REFERENCES	
District	OB
Tahsil	od
Town	•
Class I Road	—
do. II	---
do. III B	---
do. III A	---
District Boundary	---
do. Tehsili	---
Railway Open	+
do. projected	+

REFERENCES TO WORK DONE BY
FAMINE LABOUR

I-Railways	
(i) New Railways	
Earth-work	---
Ballast Collection	---
do. at quarries	---
(ii) Improvements to existing	
Earth-work	---
Ballast Collection	---
do. at quarries	---
II-Irrigation Tanks	
Completed	---
Incomplete	---
III Road Work	
Embanked	---
Moorum	---
Metalled with earthen sides	---
do. without do.	---
New roads	---
Raised in class	---
Repaired	---
Metalled at road sides	---
Moorum do.	---
Metalled at quarries	---
Moorum do.	---
IV Village Tanks	
Completed	---
Incomplete	---
Famine Relief Camps	---



NERBUDDA CIVIL DIVISION.

HOSHANGABAD DISTRICT.

Relief Operations under the Public Works Department from October 1899 to September 1900.

Four large relief-works, *viz.*, two in the Harda Tahsil, one in Hoshangabad, and one in Sohagpur, were opened in the last week of October 1899 on the dates specified by the Deputy Commissioner. One subsidiary camp was also opened at Russulpur (Itarsi) on the 24th October for *káns* eradication. The camps in the Harda Tahsil attracted crowds of labourers from the very outset; those in the other tahsils were scantily attended. The rush in the western area continued till the middle of January, when the total numbers on relief rose to upwards of 34,000. The *káns* eradication camp at Russulpur, and the Piparia (Hathwas) charge in the eastern (Sohagpur) Tahsil having failed to draw labour to any extent were closed in November and February, respectively. There was a sudden drop of about 45 per cent. in the total attendance of the district in February; but the numbers soon regained their former height notwithstanding the operation of the restrictive measures brought into force under the orders contained in Famine Circular No. 41-F, dated the 22nd January 1900. The closing week of March marked the highest point of relief, the maximum attendance recorded being 35,542. The influx of immigrants from the adjoining Native Territories largely contributed to this growth of the relief population. A census taken in March showed that at one work alone there were 2,933 foreigners, out of a total of 6,690, and that altogether there were nearly 7,500 of them on the works, representing over one-fourth of the total attendance of March. For the next two months the attendance averaged 33,000; the fluctuations during the period being due in some measure to the drafting of some 1,400 Marwaris and Beraris to the Manjrod Camp in the Nimar District (*vide* Famine Secretary's letter No. F-685, dated the 22nd March 1900, to the Commissioner, Nerbudda Division), and of 2,300 persons belonging to Holkar's Territory back to Nimawar in accordance with the instructions received from the Political Agent. The contraction of works enjoined in Famine Circular No. F-49, dated the 7th May 1900, was early given effect to. An abrupt fall in numbers took place in June. One camp was closed in July; two in August, and the remaining four in September 1900.

2. Altogether nine charges were opened in this district, including the *káns* eradication camp of Russulpur; the average distance from any charge to the furthest affected village being 5 miles. The average and maximum daily attendance per charge were about 4,000 and 10,000, respectively, representing $\frac{1}{6}$ th and $\frac{1}{4}$ th of the population served. The average and maximum numbers in the whole district amounted to upwards of 24,000 and 35,000, respectively.

Labour was chiefly employed on making new and improving existing roads and village tanks and widening the Great Indian Peninsula Railway for a double line.

The total number of day-units relieved was 7·643 millions, of which 2·320 were men, 3·116 women and 2·207 children. The total expenditure amounted to 9·01 lakhs of rupees of which 4·96 lakhs were spent on direct relief.

3 The following table gives a general idea of the progress of relief operations from their commencement to close:—

Month.	Number of charges.	Average daily attendance.	Maximum daily attendance.	Proportion of men, women and children.	PROPORTION OF WORKERS AND DEPENDANTS.			PERCENTAGE OF WORKERS AND DEPENDANTS OVER AFFECTED POPULATION.			
					Intermediate.	Task.	Gratuitous.	Intermediate.	Task.	Gratuitous.	Total.
October 1899	4	3,782	3,782	30 41 29 Men Women Children	75·71	2·88	21·41	0·58	0·02	0·16	0·76
November "	6	14,546	14,546		78·72	2·66	18·62	2·30	0·08	0·54	2·92
December "	5	31,757	31,757		77·56	2·47	19·97	4·93	0·16	1·27	6·36
January 1900	6	33,141	34,171		80·31	1·67	18·02	5·33	0·11	1·20	6·64
February "	6	24,285	29,841		84·24	...	15·76	4·10	...	0·77	4·87
March "	5	28,878	35,542		85·91	...	14·09	4·97	...	0·82	5·79
April "	7	33,749	33,749		85·96	0·24	13·80	5·81	0·02	0·93	6·76
May "	7	32,655	33,557		86·73	...	13·27	5·67	...	0·87	6·54
June "	7	25,542	32,851		86·28	...	13·72	4·42	...	0·70	5·12
July "	6	22,163	23,780		85·57	...	14·43	3·80	...	0·64	4·44
August "	5	12,735	17,068		82·62	...	17·38	2·11	...	0·44	2·55
September "	1	3,894	7,950		84·22	...	15·78	0·66	...	0·12	0·78
	8	24,284	35,542		83·62	0·68	15·70	4·07	0·03	0·76	4·86

4. The organisation of works presented no special features of difficulty. The excess of workers at certain camps in the opening months, especially of foreigners, was remedied by drafting them to other charges where plenty of employment was got ready beforehand. There was the usual preponderance of women and children which led to the formation of extensive carriers' gangs for the conveyance of metal, moorum and boulders over long distances, sometimes as much as 5 miles. The short-lead system was abandoned after a brief trial and replaced by a system of continuous leads, depôts being formed at intervals to limit the lead to one mile. There was considerable straggling at first which was soon set right. Great care was necessary in the management of gangs employed on widening the Great Indian Peninsula Railway embankment to prevent accidents. The railings were not taken down and two sets of carriers had to be engaged, one working inside and the other outside the fence.

5. There were some weakly gangs in the earlier stages on the task-work system; latterly this was found unnecessary; all gangs or groups of families working on the intermediate system and the incapables being relieved in the kitchens. The standard tasks were earth-work 80 to 100 cubic feet and metal-breaking $4\frac{1}{2}$ cubic feet (basalt) for Class I workers. On the whole the workers performed a fair proportion of the tasks allotted to them. The average proportion of workers and non-workers was as follows:—

Workers—

Intermediate ...	...	...	...	...	83 62
Task ...	...	...	...	...	0 68
Non-workers ...	...	...	...	...	15 70
Total ...					100 00

The proportion of non-workers was high, being nearly $\frac{1}{4}$ th of the total numbers, due in great measure to the immigrants who brought with them large numbers of dependants. The proportion fell with the growth of numbers, instead of rising as in the Jubbulpore Division; being 21.41 per cent. in October and 13.27 in May. This decrease may be accounted for by the fact that the influx of foreigners was greatest in the earlier months, the larger proportion of local workers with comparatively fewer dependants later on lowering the average percentage of non-workers.

6. The condition of the workers was on the whole satisfactory. The local workers as a rule came in excellent condition; but the foreigners generally arrived in a state of general debility and great fatigue. "Many infants" Captain Creagh reports, "were brought to the work suffering from marasmus, a hereditary and wasting disease which was practically incurable." Slight deterioration in condition of the local workers was observed in the rains, due largely to the fact that the more robust were the first to return to their homes, leaving persons of comparatively inferior physique behind. Elaborate arrangements were made throughout the district for an abundant and pure supply of water, which greatly contributed to the ease with which the outbreaks of small-pox and cholera introduced into the camps by newcomers were stamped out. There were altogether 721 deaths on the Public Works Department works, of which 305 were due to cholera and 46 to small-pox. The average relief population of the district being 24,284, the death-rate per *mille* was 29.7 from all causes and 15.2 excluding cholera and small-pox. The death-rate was highest in (1) the Nerbudda Camp, which contained a number of *Banjaras* and Bhopalis in bad condition; (2) Apgaon, where 120 out of 273 workers were foreigners, and (3) Chipabar, where the proportion of foreigners was 99 : 236.

7. All work except the collection of rubble for metal-breaking and the erection of huts at camps at the commencement was carried out by famine labour. The Great Indian Peninsula Railway embankment between Khandwa and Itarsi was widened for a double line (21 miles); a new approach from the Hoshangabad Railway Station (Indian Midland Railway) to the Nerbudda bridge was made; metal and moorum were collected on the Class I roads for future maintenance; and several roads were raised in class, including among others the Khirkian-Charwa ($5\frac{1}{2}$ miles) and Timarni-Sodhalpur-Rahatgaon roads ($9\frac{1}{2}$ miles), and about 20 miles of the Old Bombay Road. Four village tanks were also improved: Itarsi, Pathrota, Chipabar and Apgaon. *Káns* eradication was done to some extent in the fields adjoining Russulpur near Itarsi. The main particulars of work done are re-capitulated below:—

Description of work.	Total dry-units employed.
Railways ...	1,272,657
Roads ...	5,755,981
Tanks ...	610,359
Other works ...	3,833
Total ...	7,642,830

Railways—

Total earthwork	59'25 lakhs of cubic feet.
-----------------	-----	-----	-----	-----	----------------------------

Roads—

New roads	...	...	...	...	5 miles.
Raised in Class	...	...	...	...	31 1/4 "
Repaired	...	...	...	...	45 1/4 "
Total earthwork	...	...	...	...	119'69 lakhs of cubic feet.
" metal collection	...	...	...	...	11'14 " "
" moorum "	...	...	...	...	25'01 " "
" consolidation	...	...	...	...	8'60 " "

Village tanks	...	...	...	...	4 No.
Total earthwork	...	...	...	...	20'28 lakhs of cubic feet.

Expenditure incurred. 8. The total expenditure incurred on Public Works Department works was Rs. 9,01,147 thus:—

<i>Direct Relief—</i>					
Expenditure on "Works" Rs. 5,75,050.	Wages	...	...	...	Rs. 4,61,858
	Gratuitous	...	...	...	33,604
				Total	4,95,462
	<i>Incidental Charges—</i>				
	Items of work done by contract	...	...	...	79,588
	Special establishment	...	...	...	82,877
	Other items	...	...	...	1,68,220
	Tools and Plant	...	...	...	75,000
				Total	4,05,685
				GRAND TOTAL	9,01,147

The expenditure* on the different classes of work undertaken was as exhibited in the following table:—

Description of work.		Total No. of day-units relieved.	Total expenditure on works only.	Total value of work done at normal rates.
		No.	Rs.	Rs.
Railways	...	1,272,657	88,051	29,625
Roads	...	5,755,981	4,36,412	1,96,230
Tanks	...	610,359	50,108	17,999
Other works	...	3,833	479	360
Total	...	7,642,830	5,75,050	2,44,214

* This includes "Works" only, viz.:—(1) Wages, (2) Gratuitous, (3) Items of work done by contract.

9. The actual cost of relief works out as follows, the average price of the cheapest food-grains during the period covered by the famine being 10 seers per rupee, and the average wage-basis 11 seers:—

No. of day-units relieved per rupee of expenditure on works only	...	No.
Do. do. total expenditure	...	13
		8
Cost per 1,000 day-units—		
Direct relief	{ Wages	Rs. 60'4
	{ Gratuitous	51'2
	Total	3'7
Incidental charges—		
Items of work done by contract	...	Rs. 10'4
Special establishment	...	88
Other items	...	10'9
Tools and Plant	...	9'3
		22'0
		18'7
		9'8
		8'3
		53'1
		45'1
GRAND TOTAL	...	117'9
		100'0

Total for "Works" only 75'2 Rs. or 63'7 per cent.

The average wages earned per worker-unit and the cost per unit gratuitously relieved were approximately as follows :—

Persons relieved.	WAGES EARNED PER WORKER AND COST PER UNIT GRATUITOUSLY RELIEVED.		ALLOWANCE PERMISSIBLE UNDER THE GENERAL ORDER.		Remarks.
	Pice.	Equivalent chhittaks of grain at 10 seers per rupee (average market price of cheapest grain).*	Chhittaks of grain.	Pice at 11 seers per rupee (average wage-basis).†	
WORKERS.					
Class I	57	14'2	19	7	* This is the average price of the cheapest grain, viz., the cheapest of wheat, rice and juar.
Class II	45	11'2	15	5	
Class III	30	7'5	8	3	
GRATUITOUS.					
Class IV	48	12'0	12	4	† The average wage-basis works out to 10 per cent. lower than the market price of the cheapest grain.
Class V	16	4'0	4	1	

The workers on the whole performed enough task to earn 80 to 90 per cent. of their wages, which sufficed to give each Class I worker 14 to 15 chhittaks of grain and Class II 11 to 12 chhittaks. The grain rations actually consumed by the dependants work out to exactly those prescribed by the General Order.

Ratio of famine to ordinary rates of work. 10. The working rates bore the following ratio to the normal:—

	Ratio.
Works excluding gratuitous	2'22
Works including "	2'35
Total expenditure including all incidental charges	3'69

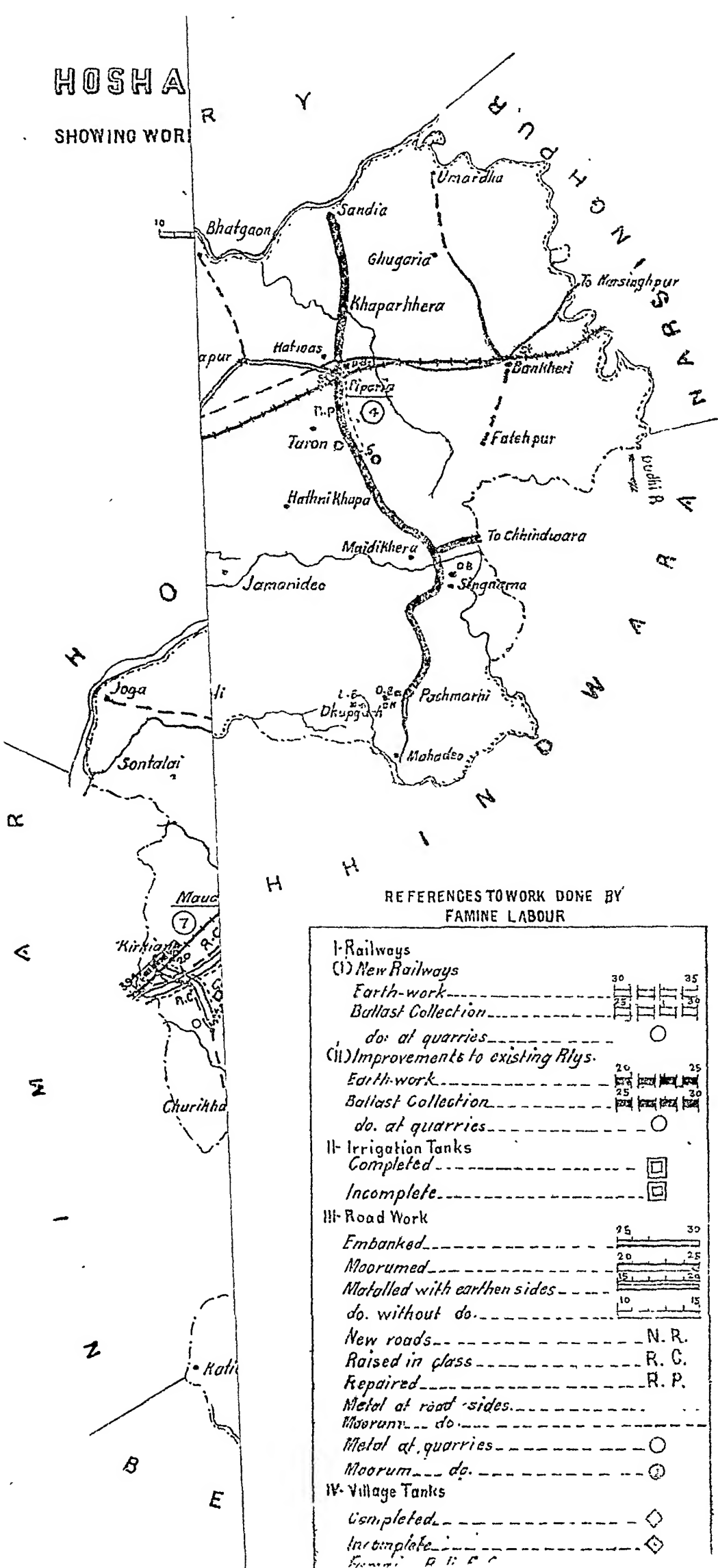
The high rates are due to several causes. A considerable amount of expenditure on preparatory measures was incurred in this district which from the point of view of economy gave no substantial return. The large relief-camp in the Sohagpur Tahsil (Hathwas) was closed after a brief existence. Arrangements were made for *kans* eradication near Itarsi, which was abandoned after a short trial. The earthwork on the widening of the open line of the Great Indian Peninsula Railway was carried out with extreme caution to avert accidents. Above all labour was very largely employed on the carriage of metal and moorum, which cost five times the normal rates. The measurements of work done and its valuation have been done with particular care by the Executive Engineer and represent the exact value of the work at ordinary contract rates.

Permanence and utility of works. 11. All the works described in paragraph 7 are distinctly useful and of a permanent character.

Casualties and Prosecutions. 12. Only one death occurred in the field staff. An Upper Subordinate, who was for some time in charge of the Harda Sub-Division, was prosecuted on a variety of serious charges. He was eventually dismissed from the service.

HOSHA

SHOWING WORK



REFERENCES TO WORK DONE BY FAMINE LABOUR

I- Railways	
(i) New Railways	
Earth-work	30 35
Ballast Collection	25 30
do. at quarries	○
(ii) Improvements to existing Rlys.	
Earth-work	20 25
Ballast Collection	25 30
do. at quarries	○
II- Irrigation Tanks	
Completed	□
Incomplete	□
III- Road Work	
Embanked	25 30
Moorumed	20 25
Metalled with earthen sides	15 20
do. without do.	10 15
New roads	N. R.
Raised in class	R. C.
Repaired	R. P.
Metal at road sides	○
Moorum do.	○
Metal at quarries	○
Moorum do.	○
IV- Village Tanks	
Completed	◇
Incomplete	◇

BETUL DISTRICT.

Relief Operations under the Public Works Department from October 1899 to September 1900.

Formal orders for the opening of five large relief-works under the Public Works Department were received on the 20th September 1899. All the five works were opened in the last week of October, in the order and on the dates specified by the Deputy Commissioner. The numbers grew steadily month by month until the high-water mark was reached on the 15th March, when 12 charges were in operation and nearly 66,000 were in receipt of relief on the Public Works. There was a fall in the attendance in April, but it rose again until the third week of May, when a general exodus from the works set in. The decline in numbers was steep and continuous right down to the closure of works on the 29th September 1900. The camps were gradually closed in the following order as required by the Deputy Commissioner:—July 2, August 3 and September 7.

2. The total number of charges opened was 12, the average distance from any charge to the furthest affected village being 6 miles. The average daily attendance per charge was 4,177, *i. e.*, 1 out of every 7 of the affected population residing within the area served, the maximum being 8,638, or 1 out of every 5. The average attendance for the whole district was 42,329; and the maximum on any one day 68,998 (March 1900).

Labour was principally employed on constructing new and improving the existing roads, collecting metal for the future maintenance of Classes I and II roads, and deepening old and making new village tanks. A telegraph line was laid between Badnur and Multai, and some agricultural improvements, such as clearing stones from fields, making field-bunds, &c., were also carried out.

The total number of day-units relieved from the commencement to the close of operations was 13,608 millions, of which 4,153 were men, 5,877 women and 3,578 children. The total expenditure, including all charges, amounted to 14.94 lakhs of rupees, of which 10.71 lakhs were spent on direct relief, *viz.*, wages and gratuitous relief alone.

3. The attendance on the works month by month was as exhibited below :—

Months.	Number of charges.	Average daily attendance.	Maximum daily attendance.	Proportion of men, women and children	PROPORTION OF WORKERS AND DEPENDANTS.			PERCENTAGE OF WORKERS AND DEPENDANTS OVER AFFECTED POPULATION.			
					Inter-mediate.	Task.	Gratuitous.	Inter-mediate.	Task.	Gratuitous.	Total.
October 1899 ...	5	18,227	21,391	31 43 26 Men Women Children	81.20	6.99	11.81	4.58	0.39	0.67	5.64
November „ ..	6	30,452	36,152		82.12	5.23	12.65	7.75	0.49	1.19	9.43
December „ ...	8	44,967	47,705		83.97	2.35	13.68	11.69	0.33	1.90	13.92
January 1900 ...	12	60,595	59,307		84.97	2.25	12.78	15.94	0.42	2.40	18.76
February „ ..	12	60,561	63,840		85.38	0.43	14.19	16.01	0.08	2.66	18.75
March „ ...	12	63,652	68,998		84.94	0.33	14.73	16.74	0.07	2.90	19.71
April „ ...	12	56,973	65,069		83.51	1.13	15.36	14.73	0.20	2.71	17.64
May „ ...	12	55,950	61,420		83.87	1.32	14.81	14.53	0.23	2.56	17.32
June „ ...	12	43,902	53,810		82.86	1.20	15.94	11.26	0.16	2.17	13.59
July „ ...	10	23,335	29,697		87.27	1.35	11.38	6.30	0.10	0.82	7.22
August „ ...	9	13,920	17,846		89.32	0.85	9.83	3.85	0.04	0.42	4.31
September „ ...	4	3,668	5,319		88.06	0.91	11.03	1.00	0.01	0.13	1.14
October „ ...	...	...	...		...	...	...	...	...	...	...
	12	42,329	68,998		84.43	1.54	14.03	11.06	0.20	1.84	13.10

4. With the exception of the inaccessibility of parts of the district, and the anxiety felt regarding the water-supply in the preparatory stage, the organisation of works gave but little trouble. There was no influx of foreigners with the exception of an occasional sprinkling of Beraris in the camps to the south of the district. During the rains the workers were chiefly employed on road consolidation. Relief-labour was found to be well adapted to this form of work, especially moorum consolidation; metal consolidation, where attempted, did not prove to be altogether satisfactory.

Systems of work, tasks, dependants, &c.

5. The average proportion of workers under the intermediate and task-work systems and of non-workers was as follows:—

Workers, Intermediate	...	...	...	...	...	84.43
„ Task	...	...	...	...	...	1.54
Non-workers	...	...	...	...	...	14.03
Total						100.00

The proportion of non-workers followed the rise and fall in the total numbers, being 11 to 12 per cent. about the commencement and the close of the operations, and 14 to 15 per cent. when the attendance was highest.

The standard tasks for the district were as follows:—

Earth-work 80 to 100 cubic feet.

Metal breaking—Hard basalt $4\frac{1}{2}$ cubic feet.

These tasks were varied to suit the circumstances of each case.

6. The condition of the workers was throughout good. Hardly any emaciated people were ever to be seen on the works in this district. The orders about nursing mothers only doing half tasks and sickly infants being given milk and other special diet were duly attended to. Cholera broke out in the month of June 1900, but it was quickly subdued.

Excellent arrangements were made for water-supply throughout the district, which even in its remotest parts contributed largely to the success in maintaining the workers in good condition. The total number of deaths registered on the Public Works Department works was 400, of which 156 were due to cholera. The average relief population being 42,329, the total mortality on the works during the eleven months, October 1899 to September 1900, was 9.5 per thousand from all causes, and 5.7 excluding cholera.

7. Practically all work was carried out by famine labour; contractors being employed only on the water-supply *bunds* and wells, &c., where relief labour could not be made available for the purpose. About 93 per cent. of the workers were employed on roads, 6 per cent. on village tanks and the rest on laying a telegraph line between Badnur and Multai and other miscellaneous works:—

Description of work.	Total day-units employed.
Roads	12,670,600
Village tanks	872,595
Other works—Miscellaneous...	65,088
Total	13,608,283

The quantity and description of work done are shown below:—

Roads—

New roads	87 miles.
Raised in class	57 „
Repaired	22 „
Total earth-work	164.42 lakhs of cubic feet.
„ metal collection	52.19 „ „
„ moorum „	123.88 „ „
„ consolidation	24.72 „ „

Village Tanks—

Total number	...	...	...	...	17
Total earth-work	...	...	...	...	50'40 lakhs of cubic feet.

Expenditure on relief. 8. The total expenditure incurred on Public Works Department works amounted to Rs. 14,93,792, thus:—

Total expenditure on "Works"	{	<i>Direct Relief—</i>					Rs.
		Wages	...	...	...	...	10,17,003
		Gratuitous	...	...	...	...	53,819
		Total					10,70,822
Rs. 10,79,146.	{	<i>Incidental Charges—</i>					Rs.
Items of work done by contract		...	...	...	...	8,324	
Special establishment		...	...	...	...	87,370	
Other items		...	...	...	...	1,74,276	
Tools and Plant		...	...	...	...	1,53,000	
Total					4,22,970		
GRAND TOTAL					14,93,792		

The expenditure* on the three classes of work undertaken was as exhibited in the following table:—

Description of work.				Total number of day-units relieved.	Total expenditure on works only.	Total value of work done at normal rates.
				No.	Rs	Rs.
Roads	...	...	...	12,670,600	10,07,739	5,18,495
Village tanks	...	...	...	872,595	65,491	40,087
Other works—Miscellaneous	...	...	...	65,088	5,916	4,780
Total				13,608,283	10,79,146	5 63,362

* This includes "Works" only, viz.,—(1) Wages, (2) Gratuitous, (3) Items of work done by Contract.

9. The cost of relief works out as follows, the average price of the cheapest food-grains during the period covered by the famine being 9 seers per rupee, and the average wage-basis $9\frac{1}{2}$ seers:—

Cost of relief and wages earned by relief workers.

No. of day-units relieved per rupee of expenditure on works only	...	13
Do. do. total expenditure	...	9

Cost per 1,000 day-units—

				No.	Rs.	Percentage.
Direct relief	Wages	...	...	74'73	68'08	Total for "Works" only, Rs. 79'30 or 72'24 per cent.
	Gratuitous	...	...	3'96	3'61	
	Total	...	...	78'69	71'69	
Incidental charges—						
	Items of work done by contract	...	...	0'61	0'55	
	Special establishment	...	...	6'42	5'85	
	Other items	...	...	12'81	11'67	
	Tools and Plant	...	...	11'24	10'24	
Total				31'08	28'31	
GRAND TOTAL				109'77	100'00	

The average wages earned per worker-unit and the cost of relief per unit gratuitously relieved work out as follows :—

Persons relieved.	WAGES EARNED PER WORKER AND COST PER UNIT GRATUITOUSLY RELIEVED.		ALLOWANCE PERMISSIBLE UNDER THE GENERAL ORDER.		Remarks.
	Pice.	Equivalent chhittaks of grain at 9 seers per rupee (average market price of cheapest grain).*	Chhittaks. of grain.	Pice at 9½ seers per rupee (average wage-basis).†	
WORKERS.					
Class I ...	70	156	19	8	* This is the average of the cheapest grain, viz., the cheapest of wheat, rice and juar.
Class II ...	55	124	15	6	
Class III ...	30	68	8	3	
GRATUITOUS.					
Class IV ...	52	117	12	5	† The average wage-basis works out to 6 per cent. lower than the average price of the cheapest food-grains.
Class V ...	17	38	4	2	

Class I workers earned nearly 88 per cent. and Class II 92 per cent. of the authorised wages. The cost of gratuitous relief very nearly approached the scale laid down in the General Order, the slight differences being ascribable to economical management of the large kitchens.

10. The ratio of famine to the ordinary contract rates works out as follows :—

Ratio of famine to ordinary rates of work.

	Ratio.
Works excluding gratuitous ...	182
" including " ...	191
Total expenditure including all incidental charges ...	265

11. The works carried out are all of permanent utility. The improvement of the Badnur-Multai Section of the North-West Road (25 miles) which connects the district head-quarters with the only outlying tahsil (Multai) is very useful.

The improvements effected on the North-West Road beyond Multai (14 miles), viz., the easing off of gradients on the ghâts and banking and moorumming throughout, will facilitate traffic between Nagpur and Betul. Considerable advance has been made towards the eventual completion of the important road from Badnur to Ellichpur on which the good work done in the famine of 1897 has been greatly added to in the present famine. Twenty-four miles of new road through hilly country have been constructed and surfaced with moorum. Four useful cross-country roads have also been constructed, viz., Badnur-Atnair-Heeradehi (22 miles), Multai-Masod-Dhaba (16 miles), Masod-Bisnore-Atnair-Satnair (30 miles), and Chilkapur-Bhaisdehi (6 miles). Seventeen village tanks have been improved; and a telegraph line has been laid between Badnur and Multai.

12. There were two deaths in the field staff, viz., one Sub-Overseer and one Work Agent. There was no criminal prosecution.

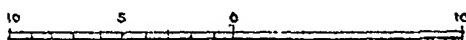
Casualties and Prosecutions.

MAP OF BETUL DISTRICT

SHOWING WORK DONE BY FAMINE LABOUR UNDER R.W.D.

1899 & 1900

Scale 1 Inch = 8 Miles



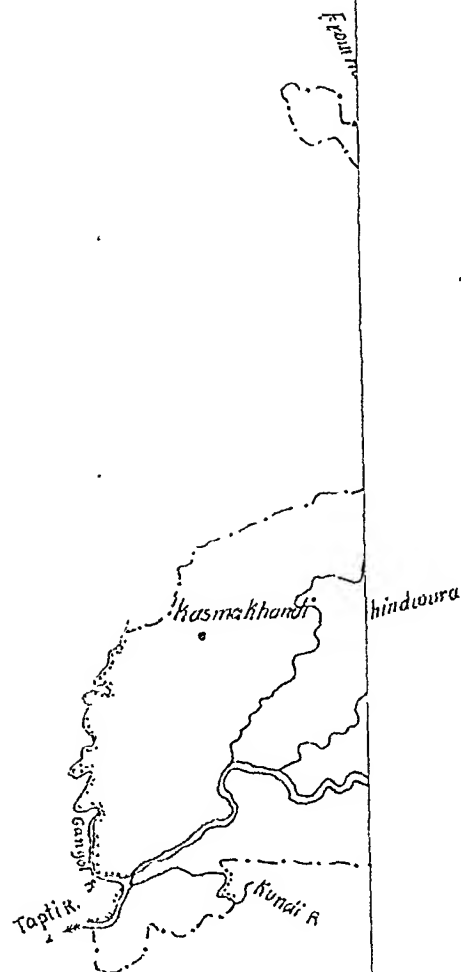
NOTE

Area in Square Miles 3,905
Population in 1891 3,23,196

REFERENCES	
District.....	○ BUDNUR
Tehsil.....	◻ Multai
Town.....	• Dabri
Class I Road.....	=====
do. II.....	=====
do. IIIA.....	=====
do. IIIB.....	=====
District Boundary.....	-----
do. Tehsili.....	-----
Railway Open.....	+++++
do. projected.....	++ ++ ++

REFERENCES TO WORK DONE BY FAMINE LABOUR

I- Railways	
(i) New Railways	
Earth-work.....	30 25
Ballast Collection.....	25 30
do. at quarries.....	○
(ii) Improvements to existing Rlys	
Earth-work.....	20 25
Ballast Collection.....	25 30
do. at quarries.....	○
II- Irrigation Tanks	
Completed.....	◻
Incomplete.....	◻
III- Road-Work	
Embanked.....	25 30
Moorumed.....	20 25
Metalled with earthen sides.....	15 30
do. without do.....	10 15
New road.....	N. R.
Raised in class.....	R. C.
Repaired.....	R. P.
Metal at road sides.....	
Moorum do.....	
Metal at quarries.....	○
Moorum do.....	○
IV- Village Tanks	
Complete.....	◇
Incomplete.....	◇
Famine Relief Camps.....	①



NIMAR DISTRICT.

Relief Operations under the Public Works Department from October 1899 to September 1900.

The first relief camp was opened after a month's warning at Barrur in the Harsud Tahsil on the 22nd October 1899, the average attendance during this month being under 2,500. Numbers grew tenfold in the course of the next few weeks, and four more charges were opened in rapid succession in November. The demand for fresh works continued in December when two additional works were thrown open after barely three or four days' notice. The attendance reached its summit in February, when altogether eight camps were open and nearly 37,000 were employed on the Public Works. There was a fall of 20 per cent. in March, after which the attendance was fairly level in April and May. Two railway camps were opened in April on the Khandwa-Akola-Basim Line. By the end of May the workers began leaving for their fields, and the camps were closed in the following order:—May, 3; June, 1; July, 2; August, 1 and September, 3; the last two camps being closed on the 28th September 1900.

2. Ten charges in all were opened in this district, the average and maximum distance from the furthest affected village to any charge being 5 and 20 miles, respectively. The average daily attendance per charge was 3,344, or 1 out of every 9 of the affected population within the area served, the maximum being 10,039 or 1 out of every 3. The average attendance for the whole district was 22,294, and the maximum 36,947. In addition to the construction of new and improvement of existing roads, relief labour was employed on several other useful works, *viz.*, construction of the Khandwa-Akola-Basim Railway, widening the Great Indian Peninsula Railway embankment for a double line, and constructing a high-level feeder into the water-supply reservoir of Khandwa at Mohgat.

Altogether 6'995 million day-units were relieved on the Public Works, of whom 2'107 were men, 2'395 women and 2'493 children. The total expenditure amounted to 7'86 lakhs of rupees, of which 4'33 lakhs were spent on direct relief alone.

3. The extent to which work-relief was given month by month is shown below:—

Months.	Number of charges.	Average daily attendance.	Maximum daily attendance.	Proportion of men, women and children.	PROPORTION OF WORKERS AND DEPENDANTS.			PERCENTAGE OF WORKERS AND DEPENDANTS OVER AFFECTED POPULATION.			
					Inter-mediate.	Task.	Gratui-tous.	Inter-mediate.	Task.	Gratui-tous.	Total.
October 1899 ...	1	2,253	3,510	30 34 36 Men Women Children	38'48	29'30	32'22	0'30	0'23	0'26	0'79
November „ ...	5	22,162	31,891		55'26	14'78	29'96	4'28	1'15	2'32	7'75
December „ ...	7	33,485	34,328		55'75	18'46	25'79	6'53	2'16	3'02	11'71
January 1900 ...	8	33,831	35,542		52'01	23'65	24'34	6'15	2'80	2'88	11'83
February „ ...	8	36,805	36,947		54'30	23'76	21'94	6'99	3'06	2'82	12'87
March „ ...	8	34,202	36,758		54'10	24'44	21'46	6'47	2'92	2'57	11'96
April „ ...	10	27,536	27,734		55'22	23'35	21'43	5'32	2'25	2'06	9'63
May „ ...	10	27,242	27,242		55'29	22'02	22'69	5'27	2'10	2'16	9'53
June „ ...	7	15,745	19,706		57'28	18'28	24'44	3'15	1'01	1'35	5'51
July „ ...	5	8,914	11,486		70'29	5'67	24'04	2'19	0'18	0'75	3'12
August „ ...	4	4,855	5,465		71'63	8'18	20'19	1'22	0'14	0'34	1'70
September „ ...	2	3,779	3,779		73'41	6'49	20'10	0'97	0'09	0'26	1'32
	10	22,294	36,947		55'65	20'76	23'59	4'34	1'62	1'84	7'80

4. The only real difficulty experienced in organising works in this district was that arising from a widespread failure of water-supply. The rainfall was abnormally low, and by the time the first symptoms of distress appeared, practically all sources of water-supply had dried up. Even the Nerbudda was at its lowest, and it was at one time feared that all workers would have to be concentrated on the banks of this river whether useful employment for them could be found or not. When the first relief camp was being opened at Barrur near Harsud, reliance had been placed on certain wells which were being deepened at the most promising sites. These failed absolutely, and for miles all round there was no drinkable water available except

at a very few village wells which scarcely sufficed for the wants of the villagers and which themselves showed signs of an early failure. Recourse was then had to a simple, inexpensive method of utilizing the stagnant pools of water held back by rocky outcrops in the nallas after they had ceased to flow. There was a large body of stagnant water close to the Barrur camp which even the cattle refused to touch. A trial was made by throwing a dam of moorum across the pool at its deepest and narrowest part, sufficiently wide to allow of a series of four-foot wells being excavated in the body of the dam. The wells were lined with corrugated iron sheets perforated at the bottom or with beer casks. For a few days the water was drawn out of these wells and thrown back into the nalla to induce a flow through the porous moorum bund which was thereby gradually washed clean and ultimately covered on its water faces with a thick vegetable scum. A most effectual process of horizontal filtration through the scum then set in, the water yielded by the wells being marvellously pure. The success of this system saved the situation throughout the Nimar, Betul and Hoshangabad districts. All large reaches of water were at once carefully searched and marked on the maps and treated in the manner described above, wherever other modes of supply were not practicable. Where water was still flowing at the time in any of these districts, dams were thrown across the streams at sites selected in consultation with the Deputy Commissioner, and the water so held back was similarly treated.

System of work, dependants, tasks, &c.

5. The average proportion of workers and non-workers was as follows :—

Workers—							
Intermediate	...	...	...	...	...	...	55
Task	...	...	...	...	...	...	21
Non-workers	...	...	...	...	...	...	24
Total							100

There were a large number of aborigines in this district, who under instructions from the Deputy Commissioner were employed on task-work instead of on the intermediate system. The proportion of task-work gangs was therefore high compared with the other districts. The proportion of dependants was also excessive, due largely to the influx of foreigners from the Bombay Presidency, Berar and the adjoining Native States in Central India.

The standard tasks for the district were—

Earth-work	...	...	...	80 to 100 (cubic feet).
Metal breaking—	...	...	...
Basalt	...	...	...	4½ (")

6. The condition of the workers was generally good, except in the case of some of the aborigines and foreigners. From April onwards nursing mothers were given only half tasks, and infants were fed with milk, &c. There were two outbreaks of cholera (December 1899 and June 1900), but they were promptly suppressed. The total number of deaths registered on the works from commencement to the close of operations was 1,011, of which 141 were due to cholera. The average relief population being 22,294, the total mortality on the works amounted to 45 per thousand from all causes and 39 per thousand excluding cholera.

This high mortality was due to the deaths among the new-comers who came from infected areas. The immunity enjoyed by the workers as a whole is thus described by the Administrative Medical Officer :* "The influence of this cause (scarcity of water) has lately been shown in a striking manner by the immunity from cholera which the workers at the relief camps, where a tight hold was kept over the water-supply, enjoyed, compared with the residents of the surrounding villages."

7. All work, except the collection of rubble for metal-breaking and the erection of huts for the camps at the beginning, was carried out by famine labour. About three-fourths of the workers were employed on road work, a little more than one-fifth on railways, and the remainder on water-supply and other miscellaneous works :—

Description of work.	Total day-units employed.
Railways	1,268,559
Roads	5,326,516
Water-supply	366,500
Other works	33,292
Total	6,994,867

The quantity and description of work done were as follows :—

Railways—

Total length	...	...	...	31 miles.
" earth-work	...	...	...	44'10 lakhs of cubic feet.
" ballast collection	...	...	...	1'64 "

* Vide Administrative Medical Officer's Report on the vital statistics of the Nimar District, to the Chief Secretary to the Chief Commissioner, dated the 9th August 1900.

Roads—

New roads	...	...	...	34 miles.
Raised in class	...	...	...	32 "
Repaired	...	...	...	11 "
Total earth-work	...	...	...	170 69 lakhs of cubic feet.
" metal collection	...	...	...	10 33 "
" moorum "	...	...	...	25 25 "
" consolidation	...	...	...	3 45 "

Water-supply—

Ajanti feeder canal (total length)	...	...	...	5 miles.
Total earth-work	...	...	...	17 lakhs of cubic feet.

8. The total expenditure incurred on Public Works Department works amounted to Rs. 7,85,496, thus :—

Total Expenditure on "Works" = Rs. 4,54,134.	{ <i>Direct Relief—</i>				Rs.
	Wages	...	...	...	3,82,901
	Gratuitous	...	...	...	49,561
					<hr/>
	Total				4,32,462
	{ <i>Incidental Charges—</i>				Rs.
	Items of work done by contract	...	...	...	21,673
	Special establishment	...	...	...	88,668
	Other items	...	...	...	1,70,664
	Tools and Plant	...	...	...	72,000
	Total				<hr/> 3,53,034
	GRAND TOTAL				<hr/> 7,85,496

The expenditure* on different classes of work undertaken was as follows :—

Description of work.				Total No. of day-units relieved.	Total expenditure on works only.	Total value of work done at normal rates.
				No.	Rs.	Rs.
Railways	...	...	...	1,268,559	73,200	36,715
Roads	..	...	...	5,326,516	3,48,752	1,64,313
Water-supply	...	...	...	366,500	28,528	16,773
Other works	...	...	...	33,292	3,654	3,650
Total				6,994,867	4,54,134	2,21,451

Cost of relief and wages earned by relief workers.

9. The actual cost of relief has been as given below, the average price of the cheapest food-grain during the famine being 9½ seers per rupee, and the average wage-basis 10 seers.

No. of day-units relieved per rupee of expenditure on "Works" only...				No.
Do.	do.	total expenditure	...	9
<i>Cost per 1,000 day-units—</i>				
				Rs. Percentage.
Direct relief	{ Wages	...	...	54'74 48'75
	{ Gratuitous	...	...	7'09 6'31
	Total	...	...	61'83 55'06
<i>Incidental charges—</i>				
	Items of work done by contract	...	...	3'10 2'76
	Special establishment	...	...	12'68 11'29
	Other items	...	...	24'40 21'73
	Tools and Plant	...	...	10'29 9'16
	Total	...	...	50'47 44'94
GRAND TOTAL				112'30 100'00

The comparatively high cost of "Establishment" and "Other items" was due to the cost of survey of new roads, &c., and to the special measures adopted to secure a sufficiency of water-supply throughout the district.

* This includes "Works" only, viz. :—(1) Wages, (2) Gratuitous, (3) Items of work done by Contract.

The average wages earned per worker-unit and the cost per unit gratuitously relieved were approximately as follows :—

Persons relieved.		WAGES EARNED PER WORKER AND COST PER UNIT GRATUITOUSLY RELIEVED.		ALLOWANCE PERMISSIBLE UNDER THE GENERAL ORDER.		Remarks.
		Pice.	Equivalent chhittaks of grain at 9½ seers per rupee (average market price of the cheapest grain).*	Chhittaks of grain.	Pice at 10 seers per rupee (average wage- basis).†	
WORKERS.						
Class I	...	57	136	19	8	* This is the average price of the cheapest grain, viz., the cheapest of wheat, rice and juar.
Class II	...	45	107	15	6	
Class III	...	3	71	8	3	
GRATUITOUS.						
Class IV	...	49	116	12	5	† The average wage-basis works out to 5 per cent. lower than the average market price of the cheapest grain.
Class V	...	16	38	4	2	

Class I workers earned less than three-fourths of the prescribed wages, and Class II less than five-sixths. This is due partly to the strictness with which the tasks were exacted, and partly to the undue proportion of task-workers (over 26 per cent.) who were chiefly aborigines and who often earned only the minimum wages. The cost of gratuitous relief closely approached the standard, the slight differences being attributable to good management.

Ratio of famine to ordinary rates of work. 10. The ratio of famine to ordinary Public Works Department rates is as follows :—

	Ratio.
Works excluding gratuitous	1.63
Do. including do	2.05
Total expenditure including all incidental charges	3.55

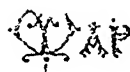
The high ratios are due partly to the carriage of metal and moorum by head-loads which cost five times as much as the normal rates, and partly to the large proportion of task-workers, mainly aborigines, who could not be fined below the minimum wage for short work.

11. The works carried out in this district are with very slight exceptions of distinct Permanence and utility of and permanent utility. A few miles of the Khandwa-Akola-works. Basim Railway have been carried out including earth-work and ballast collection. Nearly nine miles of the Great Indian Peninsula Railway have been widened for a double line. The much needed road from Burhanpur to Shahpur (5½ miles) has been completely banked and moorumed, and sufficient metal has been collected for its being eventually raised to Class I. A useful feeder road, Class III-B, has been constructed from Boregaon to the Dongergaon Railway Station (3 miles) and 15 miles of the Harsud-Khandwa Road across country *via* Asapur have been completed with moorum collection. The Mortakka-Mandhata Road (7 miles) which carries a large amount of pilgrim traffic, and several sections of the Old Bombay Road have been considerably improved. Reserve metal has been collected on the Class I roads in the district including those within the Municipal limits of Khandwa.

The Mohgat reservoir upon which the water-supply of the Khandwa Town solely depends has been permanently improved by the construction of a new high-level feeder nearly 5 miles long. The utility of this work has been proved by the rapidity with which the reservoir filled for the first time during the last rains.

12. Two gang muharrirs and two work agents were prosecuted for cheating and criminal breach of trust. One gang muharrir was sentenced to 14 months' rigorous imprisonment with a fine of Rs. 85, and one work agent to 12 months' with a fine of Rs. 60. Of the remaining two one was acquitted, and the other discharged for want of sufficient proof.

There were no deaths among the camp officials.



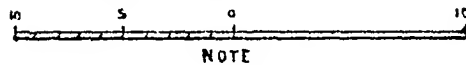
OF

NIMAR DISTRICT

WORK DONE BY FAMINE LABOUR UNDER P.W.D.

1899 & 1900

Scale 1 Inch = 8 Miles



Area in Square Miles.....3357
Population in 1891.....253,486

REFERENCES.

District.....	OKHANDWA
Tehsil.....	Burhanpur
Town.....	Suhpur
Class I Road.....	
do. II.....	
do. III B.....	
do. III A.....	
District Boundary.....	
do. Tehsil.....	
Railway Open.....	++++++
do. projected.....	++ ++ ++

REFERENCES TO WORK DONE BY
FAMINE LABOUR

I- Railways	
(i) New Railways	
Earth-work.....	30 35
Ballast Collection.....	25 30
do at quarries.....	○
(ii) Improvements to existing Rlys.	
Earth-work.....	20 25
Ballast collection.....	25 30
do at quarries.....	○
II- Irrigation Tanks	
Completed.....	□
Incomplete.....	□
III Road Work	
Embanked.....	25 30
Moorum.....	20 25
Metalled with earthen sides.....	25 30
do without do.....	10 15
New roads.....	N. R.
Raised in Class.....	R. C.
Repaired.....	R. P.
Met at road sides.....	
Moorum do.....	
Met at quarries.....	○
Moorum do.....	○
IV- Village Tanks	
Completed.....	◇
Incomplete.....	◇
Famine Relief Camps.....	①

NARSINGHPUR DISTRICT.

Relief Operations under the Public Works Department from November 1899 to February 1900.

Arrangements were made early in November for opening four relief-works in this district, *viz.*, at Deonagar, Madanpur, Bugaspur and Babai. Of these only two were opened, Deonagar on the 21st November and Babai on the 1st December. The numbers rose from 226 in November to nearly 3,000 (average) in January; but the decline was so rapid in the following month that both the camps had to be closed on the 24th February 1900.

2. The distance from the furthest affected village to the works was about 15 miles average. The average daily attendance per charge was about 800, or 1 out of every 215 of the affected population residing within the area served, the maximum being nearly 2,400, or 1 out of every 76. The average attendance for the whole district was 1,907; and the maximum attendance 4,596. Labour was employed on metal collection and eradication of *kāns* from fields. The total number of day-units relieved was 0.16 millions, of whom 0.05 were men, 0.07 were women and 0.04 were children. The total expenditure was 0.44 lakhs of rupees, of which 0.11 lakhs were expended on direct relief.

3. The following table gives the attendance on the works month by month:—

Months.	Number of charges.	Average daily attendance.	Maximum daily attendance.	Proportion of men, women and children.	PROPORTION OF WORKERS AND DEPENDANTS.			PERCENTAGE OF WORKERS AND DEPENDANTS OVER AFFECTED POPULATION.			
					Intermediate.	Task.	Gratuitous.	Intermediate.	Task.	Gratuitous.	Total.
November 1899 ...	1	226	411	32 Men Women Children	100'00	...	...	0'06	...	...	0'06
December ,, ...	2	1,583	2,690	...	92'54	...	7'46	0'40	...	0'03	0'43
January 1900 ...	2	2,998	4,596	...	90'04	...	9'96	0'74	..	0'08	0'82
February ,, ...	2	916	2,653	...	86'54	...	13'46	0'22	...	0'03	0'25
	2	1,907	4,596	...	90'40	...	9'60	0'50	...	0'05	0'55

System of work, tasks, dependants, &c.

4. The average proportion of workers and non-workers was as follows:—

Workers—

Intermediate	...	...	...	...	90
Task	...	...	...	...	Nil.

Non-Workers—

...	...	...	...	10
Total	...	...	...	100

The standard tasks for the district were:—

Metal-breaking—

Basalt	...	...	...	...	4½ cft.
Soft stone	...	...	...	...	6 „

5. The workers were always in good condition. There were only 4 deaths on the relief-works.

6. All work, except the erection of huts for the camps, was done by famine labour. About one-third of the workers were employed on metal collection, and the remainder on *kāns* eradication:—

Description of work.	Total day-units employed.			
Road-work	53,797
<i>Kāns</i> eradication	105,407
Total	159,204

Work done by famine labour.

The quantity and description of work done were as follows:—

Road work—

Raised in class	...	...	...	...	3 miles.
Total metal collection	0.82 lakhs of cubic feet.

Other works—Miscellaneous—

Kans eradication	3 square miles.
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Expenditure on relief. 7. The total expenditure incurred on Public Works Department works amounted to Rs. 44,206, thus:—

Total expenditure on "Works"— Rs. 13,409.	<i>Direct Relief—</i>				Rs.
	(1) Wages	...	...	...	10,883
	(2) Gratuitous	...	...	...	384
	Total				11,267
	<i>Incidental Charges—</i>				Rs.
	(3) Items of work done by Contract...	...	...	...	2,142
	(4) Establishment	...	...	...	10,814
	(5) Other items	...	...	...	14,741
	(6) Tools and Plant	...	..	...	5,242
	Total				32,939
GRAND TOTAL				44,206	

The expenditure * on different classes of work undertaken was as follows:—

Description of work				Total number of day-units relieved.	Total expenditure on works only.	Total value of work done at normal rates.
				No.	Rs.	Rs.
Road work	...	...	...	53,797	6,165	3,677
Kans eradication	...	...	...	105,407	7,244	8,198
Total				159,204	13,409	11,875

* This includes "Works" only, viz.:—(1) Wages, (2) Gratuitous, (3) Items of work done by Contract.

8. The actual cost of relief has been as given below, the average price of the cheapest food-grain during the famine being 10 seers per rupee, and the average wage-basis 12 seers:—

Number of day-units relieved per rupee of expenditure on works only				No.
Do.	do.	total expenditure	...	12
				4

Cost per 1,000 day-units—

				Rs.	Percentage.
Direct relief	Wages	...	...	68.36	24.62
	Gratuitous	...	...	2.41	0.87
	Total	...	...	70.77	25.49
Incidental charges—					
Items of work done by Contract				13.45	4.84
Special establishment				67.93	24.46
Other items				92.59	33.35
Tools and Plant				32.93	11.86
Total				206.90	74.51
GRAND TOTAL				277.67	100.00

he high cost of relief is due to the early closure of works before an adequate return could be obtained for the large outlay on preparatory measures.

The average wages earned per worker-unit, and the cost per unit gratuitously relieved, were approximately as shown below:—

Persons relieved.	WAGES EARNED PER WORKER AND COST PER UNIT GRATUITOUSLY RELIEVED.		ALLOWANCE PERMISSIBLE UNDER THE GENERAL ORDER.		Remarks.
	Pice.	Equivalent chittaks of grain at 10 seers per rupee (average market price of the cheapest grain).*	Chittaks of grain.	Pice at 12 seers per rupee (average wage basis).†	
WORKERS.					
Class I ...	60	150	19	6	* This is the average price of the cheapest grain, viz., the cheapest of wheat, rice and juar.
Class II ...	47	118	15	5	
Class III ...	30	75	8	3	
GRATUITOUS.					
Class IV ...	44	109	12	4	† The average wage-basis works out to be 20 per cent. lower than the average market price of the cheapest grains.
Class V ...	15	36	4	2	

Ratio of famine to ordinary rates of work.

9. The ratio of famine to ordinary Public Works Department rates is as follows:—

	Ratio.			
Works excluding gratuitous	1'10
Do. including do.	1'13
Total expenditure including all incidental charges	3'72

The high ratio including all charges is owing to the large expenditure on hutting, water-supply, conservancy, medical requirements, field staff, &c., which could not be fully utilized.

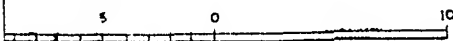
10. The metal collected on the Narsinghpur-Lakhnadon Road will be used for future maintenance. This is the only district in which *kāns* eradication has been tried on a considerable scale in accordance with Famine Circular No. F-17, dated the 14th September 1899, some three square miles of area having been operated on. At first *kāns* was eradicated by turning up the ground by digging; but this method was found to be very slow and laborious, and it was ultimately decided, in consultation with the Deputy Commissioner, to submerge the fields during the rains by throwing up a series of *bunds* and to destroy the plants by a natural process of decomposition. The land so treated has since been brought under cultivation, and the destruction of *kāns* seems to have been permanently effected. The work was found to be well suited to relief labour; but unless an extensive and continuous area could be brought under operation, it could not be taken up as a large work under the Public Works Department.

SINGHPUR DISTRICT

WORK DONE BY FAMINE LABOUR UNDER P.W.D.

1899 & 1900

Scale 1 Inch = 8 Miles



NOTE

Area in Square Miles . . . 1916
Population in 1891 . . . 367,000

REFERENCES

District ONARSINGHPUR
Tahsil Godarward
Tawn Amgaon
Class I Road
do. II
do. III B
do. III A
District Boundary
do. Tahsil
Railway Open
do. projected

REFERENCES TO WORK DONE BY FAMINE LABOUR

I- Railway	
(I) New Railways	
Earth-work	30 35
Ballast Collection	25 30
do. at quarries	
(II) Improvements to existing Rlys.	
Earth-work	30 35
Ballast Collection	25 30
do. at quarries	
II- Irrigation Tanks	
Completed	
Incomplete	
III- Road Work	
Embanked	25 30
Moorumed	20 25
Metalled with earthen sides	15 20
do. without do.	10 15
New roads	N. R.
Raised in Class	R. C.
Repaired	R. P.
Metalled at road sides	
Moorum do.	
Metalled at quarries	
Moorum do.	
IV- Village Tanks	
Completed	
Incomplete	
Famine Relief Camps	



CHHINDWARA DISTRICT.

Relief Operations under the Public Works Department from October 1899 to October 1900.

Warning was received on the 26th September 1899 that relief-works under the Public Works Department would be required within a month in the Chhindwara District. The Saoli Camp was opened on the 25th October, Amarwara on the 26th October and Oomra Nalla on the 21st November. The works in this district soon became the most crowded in the Nerbudda Division, and new charges had to be opened in rapid succession both in the north and in the south of the district to ease the congestion. The overcrowding continued in January when more works were added, and it was only in February, when altogether 10 charges were in operation, that the numbers on each work were reduced to manageable dimensions. The highest numbers were recorded on the 15th January, when over 67,000 were in receipt of work-relief. There was an abrupt fall of nearly 20 per cent. in February, and although there was some rise in March, the numbers never again regained their former height. During March and April, the attendance averaged 45 to 46 thousands daily; the exodus commenced in May, which was in some measure hastened by the outbreak of cholera on certain works, and the numbers fell steadily month by month until the closure of Public Works on the 15th October 1900. The camps were closed, month by month, as follows:—

May, 1; June, 1; July, 2; August, 3; September, 3, and October, 2.

2. Twelve camps in all were opened, of which 11 were simultaneously in operation from the end of March to end of May, the distance from the furthest affected village to the nearest camp being 6 miles average and 25 miles maximum.

The average daily attendance per charge was 3,914, *i. e.*, 1 out of every 8 of the affected population within the area served, the maximum being 14,517 or about one-third. The average attendance for the whole district was 30,648 and the maximum 67,311. Labour was chiefly employed on the Satpura Railway, and on the construction and repairs of roads and village tanks. The total number of day-units relieved was 10,603 millions, of whom 3,346 millions were men, 4,414 women and 2,843 children. The total expenditure amounted to 10,38 lakhs of rupees, of which 790 were spent on direct relief.

3. The extent to which relief was given on the works month by month is exhibited in the following table:—

Months.	Number of charges.	Average daily attendance.	Maximum daily attendance.	Proportion of men, women and children.	PROPORTION OF WORKERS AND DEPENDANTS.			PERCENTAGE OF WORKERS AND DEPENDANTS OVER AFFECTED POPULATION.			
					Intermediate.	Task.	Gratuitous.	Intermediate.	Task.	Gratuitous.	Total
October 1899 ...	2	415	2,554	Men ... 31 Women ... 42 Children ... 27	79 00	4 58	16 42	0 16	0 01	0 03	0 20
November " ...	3	10,259	22,675		73 02	11 42	15 56	2 93	0 45	0 63	4 02
December " ...	7	48,749	62,713		74 57	9 34	16 09	9 18	1 15	1 98	12 31
January 1900 ...	9	50,681	67,311		78 83	3 74	17 43	10 09	0 48	2 23	12 80
February " ...	10	41,246	50,527		77 62	3 67	18 71	8 09	0 38	1 95	10 42
March " ...	11	46,345	54,959		80 11	3 13	16 76	9 12	0 36	1 91	11 39
April " ...	11	45,259	52,775		80 23	3 52	16 25	8 92	0 39	1 81	11 12
May " ...	11	42,055	53,526		80 11	4 32	15 57	8 27	0 45	1 61	10 33
June " ...	9	31,388	42,316		81 84	3 05	15 11	6 31	0 24	1 16	7 71
July " ...	8	21,747	29,871		83 42	1 16	15 42	4 46	0 06	0 82	5 34
August " ..	7	13,064	16,374		83 30	0 99	15 71	2 67	0 03	0 51	3 21
September " ...	3	7,273	11,682		81 98	1 24	16 78	1 47	0 02	0 30	1 79
October " ...	1	1,631	2,248		83 97	...	16 03	0 34	...	0 06	0 40
	12	30,648	67,311		79 29	4 24	16 47	6 48	0 35	1 34	8 17

4. As already stated, there was overcrowding on the works in the earlier stages, which was remedied by drafting to new and useful works. The proportion of women being very high, some of them were made to do digger's work with reduced tasks.

5. The average proportion of workers and non-workers was as follows :—

System of work, tasks, dependants, &c.

Workers—

Intermediate	...	...	...	...	79
Task	...	...	...	...	4
Non-workers	...	...	...	...	17
Total	...	...	...	...	100

The standard tasks were :—

				Cft.
Ordinary earthwork	...	...	...	80
Metal-breaking	...	...	...	4 to 4½ (according to quality of stone).

The earthwork task was varied occasionally down to 70 cft. where the workers were in poor condition; it was increased to 100 cft. on the railway work after the rains. No difficulty was found in exacting tasks.

6. The condition of the workers was as a rule fairly good, and almost invariably improved after a few months on the works. Nursing mothers were put into separate gangs and lightly tasked; the infants were specially dieted where necessary. Cholera broke out in a very severe form at Ramakona in May, and subsequently spread to all the camps in a more or less virulent form. In all there were 405 deaths from the epidemic, the largest number recorded in any camp being 86 at Chowrai. By August it died out. The question of food-supply was at the commencement attended with some difficulty, there being but little grain in the district; but later on grain was imported by *banias*, and there was no further difficulty. Water was scanty, but was found by digging *jhiras*. The total number of deaths for the whole period of operations was 978. The average relief population being 30,648, the total mortality on the works amounted to 32 per thousand from all causes and 19 per thousand excluding cholera.

7. All work, except boulder collection for metal-breaking, hutting for camps, and Work done by famine labour. survey and *dagh-belling* was done by relief labour.

Description of work.	Total number of day-units employed.
Railways	956,041
Roadworks	7,929,137
Village tanks	1,717,443
Total	10,602,621

The quantity and description of work done were as follows :—

Railways—

Total earth-work	...	...	...	70'04 lakhs of cubic feet.
„ ballast collection	...	...	...	'08 „

Roads—

New roads	...	...	...	55 miles.
Raised in class	...	...	...	87 „
Repaired	...	...	...	15 „
Total earthwork	...	...	...	191'05 lakhs of cubic feet.
„ metal collection...	...	...	...	64'31 „
„ moorum collection	...	...	...	19'87 „
„ consolidation	...	...	...	4'87 „

Village tanks

Total earthwork	...	...	...	53 No.
	...	...	...	186'94 lakhs of cubic feet.

Expenditure on relief.

8. The total expenditure incurred on Public Works Department works amounted to Rs. 10,38,367, thus :—

Expenditure on "Works" Rs. 8,15,793.		<i>Direct Relief—</i>		Rs.
		Wages	...	7,31,973
		Gratuitous	...	57,854
		Total	...	7,89,827
		<i>Incidental Charges—</i>		Rs.
		Items of work done by contract	...	25,966
		Special establishment	...	59,656
		Other items	...	1,19,944
		Tools and Plant	...	42,974
		Total	...	2,48,540
		GRAND TOTAL	...	10,38,367

The expenditure* on the different classes of work undertaken was as follows :—

Description of work.		Total No. of day-units employed.	Total expenditure on works only.	Total value of work done at normal rates.
		No.	Rs.	Rs.
Railways	...	956,041	68,208	37,579
Road work	...	7929,137	6,24,004	4,39,972
Village tanks	...	1,717,443	1,23,581	1,13,125
Total	...	10,602,621	8,15,793	5,90,676

* This includes "Works" only, viz. :—(1) Wages, (2) Gratuitous, (3) Items of work done by Contract.

9. The actual cost of relief has been as given below, the average price of the cheapest food-grain during the famine being 9½ seers per rupee, and the average wage-basis 11 seers :—

No. of day-units relieved per rupee of expenditure on "Works" only...		13	No.
Do.	do.	total expenditure	...
Cost per 1,000 day-units—			
		Rs.	Percentage.
Direct relief	Wages	...	69'04
	Gratuitous	...	5'46
	Total	...	74'50
Incidental charges—			
Items of work done by contract		...	2'45
Special establishment		...	5'63
Other items		...	11'31
Tools and Plant		...	4'05
Total		...	23'44
GRAND TOTAL		...	97'94

Total for "Works" = 76'95 Rs. or 78'57 per cent.

The average wages earned per worker-unit and the cost per unit gratuitously relieved were approximately as follows :—

Persons relieved.	WAGES EARNED PER WORKER AND COST PER UNIT GRATUITOUSLY RELIEVED.		ALLOWANCE PERMISSIBLE UNDER THE GENERAL ORDER.		Remarks.
	Pice.	Equivalent chhittaks of grain at 9½ seers per rupee (average market price of cheapest grain).*	Chhittaks of grain.	Pice at 11 seers per rupee (average wage-basis) †	
WORKERS.					
Class I	6 5	15.4	19	7	* This is the average price of the cheapest grain, viz., the cheapest of wheat, rice and juar.
Class II	5.1	12.1	15	5	
Class III	3 0	7.1	8	3	
GRATUITOUS.					
Class IV	5.8	13.9	12	4	† The average wage-basis works out to be 16 per cent. lower than the average market price of the cheapest grain.
Class V	1.9	4.6	4	2	

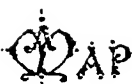
There was a large quantity of earthwork to be done on the roads and tanks and the Satpura Railway; and the workers earned very nearly their full wages. The high cost of gratuitous relief is due to the expenditure on feeding the sick and weakly.

10. The ratios of famine to ordinary Public Works Department rates work out as follows; but as the measurements of work done are only approximate, much reliance cannot be placed on these ratios :—

Ratio of famine to ordinary rates of work.	Works excluding gratuitous	...	...	1.28
	" including "	...	...	1.38
	Total expenditure including all charges	...	...	1.76

11. The problem of finding useful employment for relief labour in this district was an easy one. The improvement effected in the communications of this district in the famine of 1896-97, although considerable, left much to complete. Work was readily available on the main roads connecting Chhindwara with Narsinghpur on the north, Nagpur on the south, and Betul on the west. All these roads have been considerably improved. The earthwork on the Duledo Ghât (45th to 50th mile) will immensely facilitate traffic between Chhindwara and Narsinghpur. A ghât road has been made to establish communication between the forests of the Ambara tract and the open country of the Linga Circle. The earthwork and ballast collection on the Seoni-Chhindwara Branch of the Satpura Railway, moreover, afforded excellent employment. The work was commenced in March; of a total length of 28 miles in this district, 16 miles of embankment have been fully carried out and 10 miles partially completed. Some ballast has also been collected along the line. Thirty-three useful village tanks have been constructed and 20 old ones have been improved. The Kukra Tank improved near Chhindwara will be of great value to the town.

12. One Officer-in-charge, one Work Agent and four Gang Muharrirs died of cholera on the works. Two Gang Muharrirs were sentenced to two and four months' rigorous imprisonment respectively for misappropriation of workers' wages, one Mate to two months' imprisonment for taking bribes from workers, and one dâk runner was fined Rs. 20 for robbing dâk bags.



OF

CHHINDWARA

SHOWING WORK DONE BY FAMINE

1899 & 1900

Scale 1 inch = 8 miles



NOTE

Area in Square Miles

Population in 1891

REFERENCE

District	---
Tahsil	---
Town	---
Class I. Road	---
do. II	---
do. III B	---
do. III A	---
District Boundary	---
do. Tehsil	---
Railway Open	---
do. projected	---

REFERENCES TO WORK DONE BY FAMINE LA

I-Railways.

(i) New Railways

Earth-work

Ballast Collection

Do at quarries

(ii) Improvements to existing

Earth-work

Ballast collection

Do at quarries

II- Irrigation Tanks

Completed

Incomplete

III Road work

Embanked

Macrumed

Not stilled with earthen

Do. without do.

New roads

Raised in class

Repaired

Metal at road side

Moorum do.

Metal at quarries

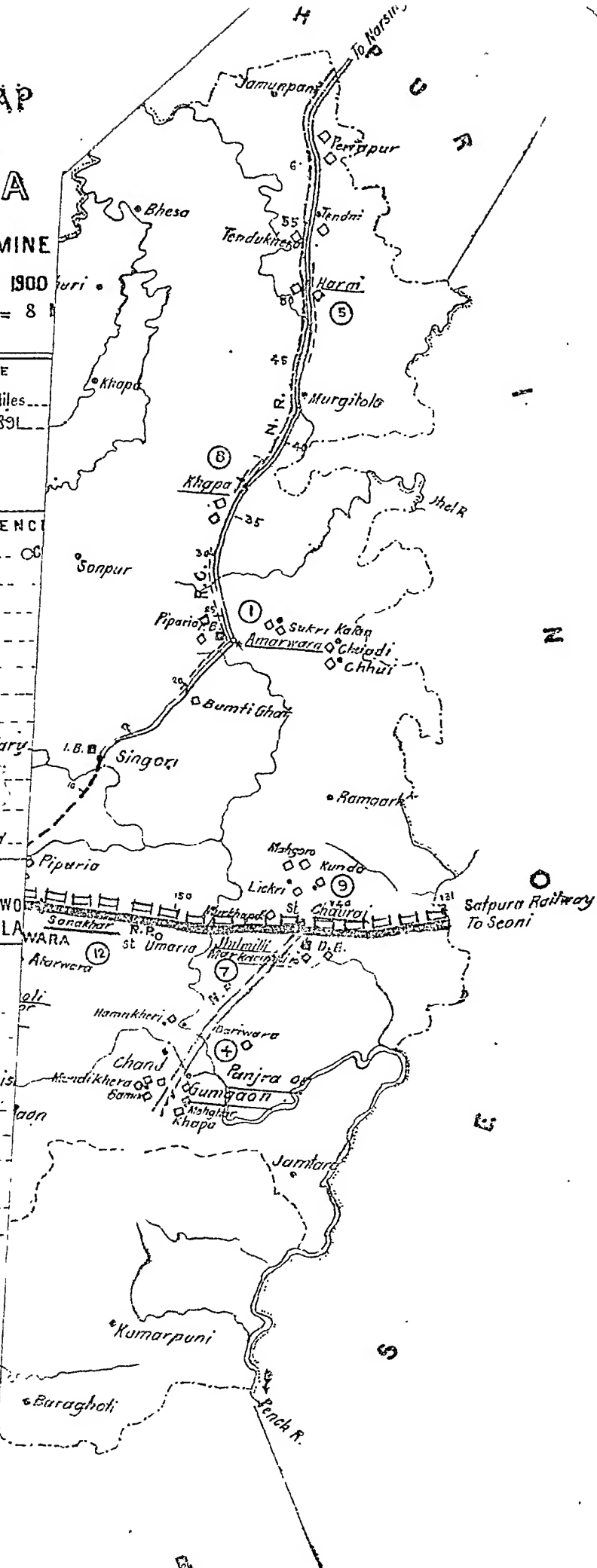
Moorum do.

IV- Village Tanks

Completed

Incomplete

Famine Relief Com



RAIPUR DISTRICT.

Relief Operations under the Public Works Department from October 1899 to October 1900.

The preliminary programme prepared in August 1899 in respect of the impending famine, contemplated the opening of 11 relief charges under the Public Works Department in this district. The usual month's notice for their organization was accordingly given to this Department on the 2nd October 1899. The first relief camp was opened at Baloda on the 22nd October 1899. It was closely followed up by 11 more in the month of November, the attendance rising from about 2,000 to 58,000 during this brief period. The numbers increased daily with far greater rapidity than the measures which the local Public Works Department Officers could possibly take to provide for them; and the situation became critical in January when they touched the unprecedented total of over two-and-a-quarter lakhs. For the concentration of such a large number of workers and with in so short a space of time, the Public Works Department were but imperfectly prepared; and the only course open to avert a disastrous break-down of the relief organization was to stop free admission peremptorily. With a simultaneous expansion of the village works, the Civil Department were able to come promptly to the rescue and take all new applicants off the hands of this Department. Full advantage was taken of this temporary respite in making out, in consultation with the Civil authorities, an approximate forecast of all possible needs, and improvising a comprehensive programme of works to cover the whole district. A scheme of 62 charges was drawn up, of which 56 in all were subsequently opened. A very salutary reorganisation of works was also effected during the interval. The supervision and conduct of all details were placed on an improved basis and the conditions of relief were made as repellent as possible consistently with the paramount duty of saving life. The tasks were stiffened, discipline was enforced with the utmost rigour, even the infirm unless absolutely helpless were subjected to a labour-test, and a full 8 hours' work was exacted from all. The effect of these measures will be clear from the following figures:—

Month.	No of camps open on the last day of the month.	Average daily attendance for the whole district.	Average daily attendance per charge.	Remarks.
January	24	207,991	8,666	There was some rise in the total attendance in February and March owing to a misapprehension of orders in the remoter camps.
February	38	210,777	5,547	
March	43	227,776	5,277	

2. The Public Works Department camps were again thrown open at the end of March, the highest attendance recorded during the month being 243,324 or one-sixth of the total population of the district. Two charges were closed during March (Deori and Arjonda), the workers being drafted to the tank-works at Sanjari, Gunderdehi and Khapri. In April 4 new camps were opened, 2 of which were specially designed to relieve pressure in the Drug Tahsil, where a tendency to overcrowding again manifested itself. Six more were opened in May, partly to provide work on the construction of the Raipur-Vizianagram Railway (Karti and Arang camps) and ballast collection for the Bengal-Nagpur Railway at Siliyari, and partly to ease congestion at certain camps. Four charges, which had become superfluous, were closed during the month, leaving 49 camps open at the end of May with an average attendance of less than 4,500 daily. The extreme severity of the hot weather and the presence of cholera during April and May had led to some relaxation in the exaction of tasks and the observance of the eight hours' rule. On the receipt of Famine Circular No. F-49, dated the 7th May 1900, however, severer conditions were at once introduced; the tasks were enhanced 25 to 50 per cent., the rest-day wage was abolished and no consideration was allowed for wet days. Nine camps were closed in June and 21 more in July, when the numbers fell 50 per cent.; of the remainder, 9 ceased to exist in August; 8 in September and 2 in October. The Public Works Department operations terminated on the 19th October 1900.

3. The total number of charges opened in the district was 56, each camp serving an area of about 200 square miles, representing a circle of about 8 miles radius. The total number of day-units relieved amounted to 45,258 millions, of whom 15,346 were men, 19,349 women and 10,563 children. Amongst workers the average proportion of men, women and children was as 100:126:30. In July, however, this proportion was as 100:186:35, a larger number of men having returned to their villages than women. The total expenditure was 50.35 lakhs of rupees, of which 32.74 lakhs were expended on direct relief (wages and gratuitous).

The following table exhibits the course of operations from their commencement to close:—

Month.	Number of charges.	Average daily attendance.	Maximum daily attendance.	Proportion of men, women and children.	PROPORTION OF WORKERS AND DEPENDANTS.			PERCENTAGE OF WORKERS AND DEPENDANTS OVER AFFECTED POPULATION.			
					Intermediate.	Task.	Gratuitous.	Intermediate.	Task.	Gratuitous.	Total.
October 1899 ..	1	2,224	2,613	Men Women Children 54 42 23	100.00	...	...	0.16	...	...	0.16
November " ...	12	33,593	57,777		76.74	19.34	3.92	1.82	0.46	0.09	2.37
December " ..	19	117,160	157,764		85.49	6.97	7.54	7.08	0.58	0.62	8.28
January 1900 ...	24	207,991	237,249		87.88	0.74	11.38	12.92	0.11	1.67	14.70
February " ...	38	210,777	226,227		82.12	1.80	16.08	12.23	0.27	2.40	14.90
March " ...	43	227,776	243,394		80.43	1.32	18.25	11.57	0.19	2.62	* 14.38
April " ..	47	205,644	225,490		79.07	3.61	17.32	10.26	0.47	2.25	12.98
May " ...	49	219,806	220,329		77.08	6.93	15.99	10.70	0.96	2.22	13.88
June " ...	40	200,969	219,079		78.02	7.40	14.58	9.90	0.94	1.85	12.69
July " ...	19	107,028	134,638		80.69	2.18	17.13	5.45	0.15	1.16	6.76
August " ...	10	29,066	50,839	...	72.92	3.28	23.80	1.33	0.06	0.44	1.83
September " ...	2	9,649	11,970		78.46	...	21.54	0.48	...	0.13	0.61
October " ...	...	3,154	3,154		77.65	2.65	19.70	0.15	0.01	0.04	0.20
	56	1,31,237	243,394	...	80.94	4.03	15.03	7.03	0.35	1.30	8.68

* Maximum 16 per cent.

4. The difficulties in the way of good organisation in the Chhattisgarh districts were from the outset far greater than those met with elsewhere. They will be briefly alluded to in the review of operations in the Bilaspur District. To narrate them more fully would be to chronicle all that the Public Works Department did and suffered at the height of the famine. For it is no exaggeration to say that the Chhattisgarh Division, during the most trying period, almost monopolised the attention and energies of the Public Works Department administration.

An unfortunate feature of the situation was the paucity of senior officers to take charge of relief-works in the Chhattisgarh Division. The desirability of having a separate charge with its head-quarters at Bilaspur had been recognized from the first; but the obstacles in the way of providing a suitable officer for the existing Public Works Department Division at Raipur precluded the possibility of creating a second charge within the Chhattisgarh Division. By the time an officer of experience from the Military Works Department could be placed at the head of affairs, the situation had reached a critical stage. It was consequently necessary at the end of January to order the suspension of free admission on the Public Works and subsequently to appoint a senior officer of the Public Works Department to the post of Superintendent of Works in the southern half of the Province generally and the Chhattisgarh Division in particular.

5. Until the original programme of works could be revised and expanded so as to embrace all new roads, tanks and railways, &c., that could be undertaken in the District, the principal form of employment for the large numbers that flocked to the works consisted of the carriage of moorum and metal by head-loads. The relay system as laid down in Appendix XXIV to the General Order No. 287—7630-F., dated the 20th September 1899,

was slightly modified and improved, and worked successfully in the Drug, Gandai and Baloda Sub-Divisions. But it appears to have failed in the Raipur, Dhamtari, Rajim and Arang Sub-Divisions where the independent gang system was preferred both by the workers and the staff. From the commencement the greatest apprehension prevailed regarding water-supply. Nearly all tanks which in Chhattisgarh are the main sources of drinking water-supply dried up before the advent of the hot weather, and even large rivers like the Mahanuddy and the Sheonath were reduced to mere streamlets. To meet the anticipated scarcity of water various measures were adopted suitable to the circumstances of each locality. At some charges where rivers and large nallas with sandy beds were within easy reach, corrugated culvert pipe wells were sunk in their dry sandy beds. In the smaller streams the sub-soil flow was arrested by the construction of puddle dams below their beds and wells were sunk above these dams. Wells were also dug in large numbers in the beds of dry tanks and nallahs and in other favourable situations. Water was, moreover, collected at a few places by constructing temporary earthen bunds across rocky nallah beds; and pure drinking water was obtained from these pools by adopting the method so successfully followed in the Nimar District.

6. The intermediate system was generally adopted for all able-bodied workers from the commencement, task-work being introduced later on in March when the number of weakly persons began to increase to such an extent as to justify the formation of separate task work gangs. At the commencement tasks were fixed in accordance with the instructions contained in General Order No. 287—7630-F, dated 20th September 1899, but they were gradually raised as workers got used to the works and continued to remain in robust condition. The only work on which tasks as laid down in the General Order could not be exacted fully, especially during the hot weather months, was the carriage of moorum and metal by head-loads. The full performance of the task assigned depended much on the size of baskets, lead, &c., which varied frequently. On earthwork of roads and tank bunds the tasks fixed varied from 80 to 120 cubic feet per digger in soft and 60 to 100 in hard moorum soils, the exact amount being fixed in each case by the Sub-Divisional-Officer on the spot by actual experiment.

In the earlier stages penalties for short work on the intermediate system were not always correctly or regularly imposed. This was due in a large measure to the fact that most of the staff were new and unfamiliar with the Departmental routine and relief methods. Subsequently, however, tasks were correctly measured by the Work Agents and payments were made strictly according to results.

7. The average proportion of workers and non-workers was as follows :—

Workers—

Intermediate	...	...	...	81
Task ...	...	...	...	4
Non-workers	...	...	...	15
Total				100

During November and December the proportion of task workers was 19·34 and 6·97 per cent. respectively of the entire relief population. This was due to a misapprehension of orders in the Arang Sub-Division where work at the Gorari charge was started wholly on the task-work system and the mistake remained unnoticed for some time. The exercise of discretion at first freely allowed to the Officers-in-Charge for the formation of infirm gangs for such persons as were incapable of performing any but a nominal task, was curtailed early in January.

It will be seen from the table in paragraph 3, that the proportion of dependants rose steadily from 3·92 in November to 18·25 in March. In February although the average daily attendance practically remained the same as it was in January, the number of dependants rose nearly 40 per cent. This was due to the fact that penalties for short work began to be systematically imposed during February, while the Sunday wage was stopped and the general wage-scale was reduced. Workers who could previously save on their earnings and support their dependants in their own homes were thus obliged to bring them over to the works. While, therefore, a number of the able-bodied who were not really needy returned to their villages, the weakly dependants came in and took their place in the camps. From April to June the proportion of dependants declined slightly on account of the substitution of cooked food for the minimum wage to the infirm people. The proportion of dependants rose again in July and attained its maximum in August, when it was 23·80 per cent. This high percentage was due partly to the fact that on the monsoon setting in many of the adult male workers who returned to their villages left their women, children and dependants behind on the works; and partly to the substitution of food in the kitchen for cash wages to the working children who were thus returned as gratuitously relieved.

8. The condition of the workers was on the whole satisfactory. On the advent of the hot weather physical deterioration became manifest in certain parts of the Dhamtari Tahsil. But the efforts made at the relief-camps to restore the condition of the emaciated persons almost always proved successful. Infant mortality was checked early by special treatment and the most liberal diet. Emaciated infants and children were rarely to be found on the Public Works Department works except a few in the kitchens who were mostly orphans and not dependants of workers. In the case of able-bodied nursing mothers reduction in tasks and light forms of employment did much to maintain them in good condition.

Cholera broke out in certain charges in the Dhamtari Tahsil about the end of March and subsequently (April and May) appeared practically at all the charges. But it was quickly stamped out. This was entirely due to the excellent food and water supply and careful sanitary arrangements. At certain charges where water-supply was either defective or polluted, 25 to 50 per cent. of the workers were engaged in carrying water from distant sources to ensure both purity and abundance of supply.

The total number of deaths registered on the works from the commencement to the close of the relief operations was 1,111 of which 327 were due to cholera. The average relief population being 131,237 the total mortality on the works amounted to only 8.47 per *mille* from all causes and 5.9 per *mille* excluding cholera.

9. During the first two months of the relief operations famine labour was almost wholly employed on the improvement of existing roads and collection of moorum and metal for their maintenance. In January several village tanks adjacent to the Public Works Department charges were taken up as *annexes*. Some earthwork was also done on the Raipur-Dhamtari feeder line between Rajim and Kurudh and moorum collected for ballast. In February and March several irrigation tank projects were put in hand and work valued at about 2½ lakhs of rupees was executed on their construction. Towards the end of April earthwork was started on such portions of the Raipur Vizianagram Railway as could conveniently be worked from the nearest Public Works Department camps and a certain amount of boulder and ballast was also collected, the total work executed being valued at Rs. 21,150.

10. The total number of day-units employed on each class of work is shown below:—

Description of work.	Total day-units employed.
Railways	1,189,752
Irrigation	5,473,421
Roads	32,713,460
Village tanks	5,295,248
Other work—Miscellaneous	585,017
Total	45,257,893

The quantity and description of work done were as follows:—

Railways—

Length	51 miles.
Total earthwork done	43.78 lakhs of cubic feet.
„ Ballast collection	8.37 „ „

Irrigation works—

Total earthwork	269.43 „ „
„ stone pitching	3.94 „ „
„ masonry	0.14 „ „

Roads works—

New Roads	125½ miles.
Raised in class	232 „
Repaired	39 „
Total earthwork	445.63 lakhs of cubic feet.
„ metal collection	111.75 „ „
„ moorum „	154.10 „ „
„ consolidation	55.46 „ „

Village tanks (total number)	39
Total earthwork	308.68 lakhs of cubic feet.

Expenditure on relief.

11. The total expenditure incurred on Public Works Department works was as follows :—

Expenditure on "Works" = Rs. 36,24,893.	<i>Direct relief—</i>				Rs.
	Wages	...	...	...	36,07,314
	Gratuitous	...	...	...	2,67,213
	Total				32,74,527
	<i>Incidental Charges—</i>				Rs.
	Items of work done by contract	...	...	...	3,50,366
	Special establishment	...	...	...	3,10,352
	Other items	...	...	...	7,20,944
	Tools and Plant	...	...	...	3,78,906
	Total				17,60,568
	GRAND TOTAL				50,35,095

The expenditure * by classes of works was as given below :—

Description of work.				Total number of day-units relieved.	Total expenditure on works only.	Total value of work done at normal rates.
				No.	Rs.	Rs.
Railways	...	...	...	11,89,752	94,417	33,600
Irrigation works	...	...	...	54,73,421	4,10,878	2,38,406
Road work	...	...	...	3,27,13,460	26,77,577	9,73,344
Village tanks	...	...	...	52,95,248	4,02,194	1,42,875
Other works—Miscellaneous	...	...	...	586,017	39,827	17,310
Total				45,257,893	36,24,893	14,05,535

* This includes "Works" only, viz. :—(1) Wages, (2) Gratuitous, (3) Items of work done by Contract.

121,311 day-units were employed at various times in carrying rice for the Civil Department, the cost of which has been debited to that Department.

Cost of relief and wages earned by relief-workers.

12. The cost of relief has been as follows, the average price of the cheapest food-grain during the period being 10½ seers per rupee and the average wage-basis 11½ seers :—

				No.
No. of day-units relieved per rupee of expenditure on works only				12
Do.	do.	total expenditure	...	9

Cost per 1,000 day-units—

				Rs.	Percentage.	Cost of "Works" = Rs. 80 or 72 per cent.
Direct relief	{	Wages	...	66'5	59'7	
		Gratuitous	...	59	5'3	
Total			...	<u>72'4</u>	<u>65'0</u>	
Incidental charges—						
Items of work done by contract	...	...	7'7	7'0	
Special establishment	...	...	68	6'2	
Other items	...	...	15'9	14'3	
Tools and Plant	...	...	<u>8'4</u>	<u>7'5</u>	
Total			...	<u>38'8</u>	<u>35'0</u>	
GRAND TOTAL				...	<u>111'2</u>	<u>100'00</u>

The average wages earned per worker-unit and the cost of relief per unit gratuitously relieved work out as follows:—

relieved work out as follows.

Persons relieved.	WAGES EARNED PER WORKER AND COST PER UNIT GRATUITOUSLY RELIEVED.		ALLOWANCE PERMISSIBLE UNDER THE GENERAL ORDER.		Remarks.
	Pice.	Equivalent chhittaks of grain at 10½ seers per rupee (average market price of cheapest grain).*	Chhittaks of grain.	Pice at 11½ seers per rupee (average wage-basis).†	
WORKERS.					
Class I ...	6.1	16.0	19	7	* This is the average price of the cheapest grain, viz., wheat, rice and gram.
Class II ...	4.8	12.7	15	5	
Class III ...	3.0	7.9	8	3	
GRATUITOUS.					
Class IV ...	6.0	15.7	12	4	† The average wage-basis works out to 10 per cent. lower than the average market price of the cheapest grain.
Class V ...	2.0	5.2	4	1	

It would appear from the above table that Class I workers earned of the whole 87 and Class II 96 per cent. of their full wages.

The cost of gratuitous relief was high in consequence of the liberal manner in which all weakly people, emaciated children and infants and nursing mothers &c., were treated.

Ratio of famine to ordinary rates of work. 13. The ratio of famine to the ordinary contract rates works out as follows:—

	Ratio.
Works excluding gratuitous ...	2.39
Works including gratuitous ...	2.58
Total expenditure including all incidental charges ...	3.58

The high ratios are due chiefly to the carriage of moorum and metal by head-loads which cost five times as much as the ordinary rates and to the large expenditure on water-supply, sanitary measures, special dieting of the sick and infirm, &c.

14. The permanence and utility of the works carried out will depend largely on what steps are taken to complete them. Of the new roads undertaken the Commissioner considers the following of first class utility, viz., (1) Rajnandgaon-Antagarh Road (38 miles), (2) Rajim-Deobhog (19 miles.) He also considers Lohara-Balod-Dhamtari (29 miles) and Ganderdehi-Arjunda-Rajnandgaon (13 miles) Roads to be useful and important. The irrigation tanks at Sanjari, Sorli, Marowda, Arunda Khapri, Gunderdehi, Khaprora and Hatod will be of the greatest benefit when completed. The earthwork and ballast collection, &c., done on the Raipur-Dhamtari feeder line, the Raipur-Vizianagram Railway and the Bengal-Nagpur Railway are distinctly useful. The large quantity of metal and moorum collected on the existing roads will be of great service in reducing the cost of their future maintenance. The village tanks deepened and strengthened (33 in all) will be very useful to the villagers.

15. Sub-Conductor H. Naylor of the Military Works Department, one surveyor, one work agent, one tools muharrir, two kitchen muharrirs and one mistry died of cholera. One work agent died of dysentery. A gang muharrir employed on quarrying stone died from the effects of an explosion. Havaladar Rungaswamy, a tools muharrir, died of a gunshot wound which was the result of an accident.

Two temporary employes of the Executive Engineer's Office, viz., the Superintendent of the Office and the Personal Assistant were prosecuted for accepting illegal gratification in their capacities as public servants. They were convicted by the Magistrate but acquitted on appeal. One work agent was sentenced to four months' rigorous imprisonment under Section 354 of the Indian Penal Code., One gang muharrir was sentenced to six months' rigorous imprisonment for criminal breach of trust. Cases against an Accounts Clerk for criminal breach of trust and two gang muharrirs for assault and attempt to deter a public servant from the discharge of his duty and against one Hospital Assistant, are still under trial.



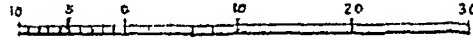
OF

RAIPUR DISTRICT

OWING WORK DONE BY FAMINE LABOUR UNDER P.W.D.

1899 & 1900

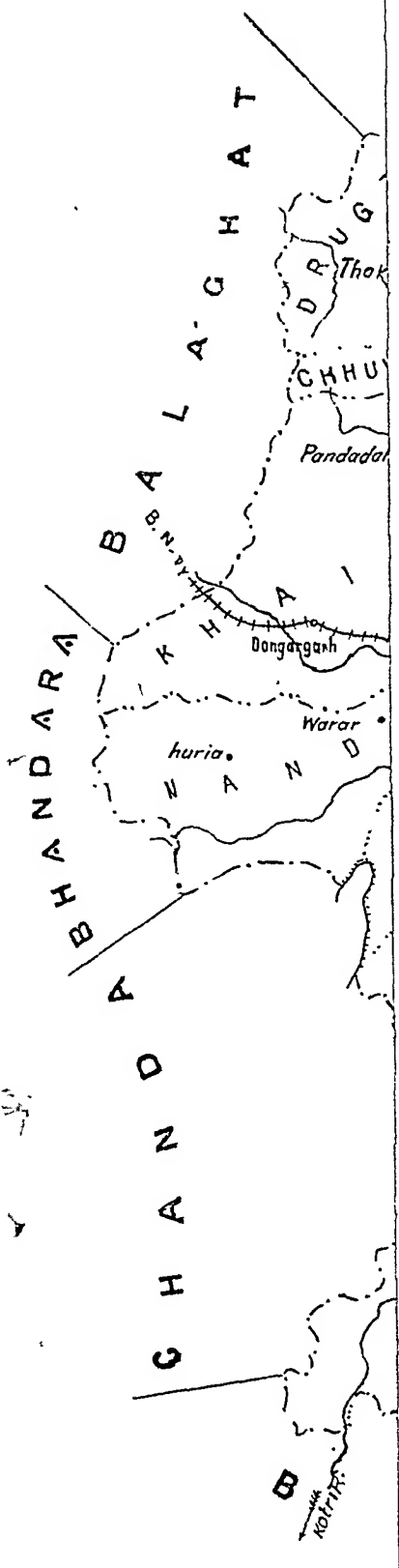
Scale 1 Inch = 16 Miles



NOTE

Area in Square Miles.....11885

Population in 1891.....1584,427



REFERENCES

District.....	ORAI PUR
Tahsil.....	Simga
Town.....	Oharrifoi
Class I Road.....	
do. II.....	
do. III B.....	
do. III A.....	
District Boundary.....	
do. Tahsili.....	
Railway Open.....	
do. projected.....	

REFERENCES TO WORK DONE BY FAMINE LABOUR

I-RAILWAYS	
(i) New Railways	
Earth work.....	
Ballast Collection.....	
do. at quarries.....	
(ii) Improvements to existing Railways	
Earth work.....	
Ballast Collection.....	
do. at quarries.....	
II-Irrigation Tanks	
Completed.....	
Incomplete.....	
III-Road work	
Embanked.....	
Moorumed.....	
Metalled with earthen sides.....	
do. without.....	
New Road.....	N.R.
Raised in Class.....	R.C.
Repaired.....	R.P.
Metall at road sides.....	
Moorum .. do.....	
Metall at quarries.....	
Moorum .. do.....	
IV-Village Tanks	
Completed.....	
Incomplete.....	
Famine Relief Camps.....	

BILASPUR DISTRICT.

Relief Operations under the Public Works Department from November 1899 to October 1900.

Nine Public Works Department charges were requisitioned during October 1899; of these 8 were opened in quick succession in November and one early in December. The numbers augmented rapidly, and over a lakh of people were crowded on the works in the course of a very few weeks. The rush in January was overwhelming; and although seven new charges were added during December and January to relieve pressure in the most congested areas, the demand for work-relief speedily outran all measures that the local Public Works Department authorities could devise. The numbers on each charge fluctuated between 8,000 and 10,000 daily, and in some instances ran up as high as 20,000. The stoppage of free admission became a matter of imperative necessity; and for nearly two months (February and March) all new applicants were referred to the Civil Officers for employment on village works. Breathing time was thus afforded for the splitting up of all overcrowded charges and their re-organisation on a more satisfactory basis. By the end of March, the Public Works Department organisation was sufficiently amplified to meet all pressing demands. In all 26 camps were now thrown open and the daily attendance per charge was within manageable dimensions. Free admission was resumed, but the numbers seldom grew beyond 5,000 to 6,000 per charge, the average being 4,000 or under.

Steps were taken for the contraction of public works on the approach of the monsoon, and by the end of May six relief-camps were closed; six more were closed in July and ten in August. The remaining charges were gradually wound up in September, only one remaining open in October (Bilaspur head-quarters camp), which also ceased to exist on the 22nd October 1900.

2. The total number of camps opened was 29, each charge serving an area of about $9\frac{1}{2}$ miles radius. In some tracts, however, several overflow camps had to be opened along the same line of road in order to relieve the overcrowded charges; this reduced the distance of such works from the affected villages to less than 5 miles. Labour was at first engaged chiefly on the construction of new and improvement of existing roads, and subsequently on the construction of some new irrigation tanks and the improvement of a number of old village tanks adjacent to the roads. The construction of the Bilaspur-Mungeli Feeder Railway and ballast-breaking for the Bengal-Nagpur Railway were also taken up later on in May. The total number of day-units relieved amounted to 21,453 millions, of whom 6,734 were men, 8,821 women and 5,898 children. The total expenditure was 23.52 lakhs, of which 15.35 lakhs of rupees were expended on direct relief (wages and gratuitous charges).

3. The following table illustrates the main features of the attendance on the works month by month:—

Months.	Number of charges.	Average daily attendance.	Maximum daily attendance.	Proportion of men, women and children.	PROPORTION OF WORKERS AND DEPENDANTS.			PERCENTAGE OF WORKERS AND DEPENDANTS OVER AFFECTED POPULATION.			
					Inter-mediate.	Task.	Gratuitous.	Inter-mediate.	Task.	Gratuitous.	Total.
November 1899 ...	8	15,926	27,184	Men 31 Women 41 Children 28	67.49	21.83	10.68	1.05	0.34	0.16	1.55
December " ...	12	67,983	101,921		85.05	1.14	13.81	5.53	0.07	0.90	6.50
January 1900 ..	15	117,698	121,896		84.44	0.14	15.42	9.43	0.02	1.72	11.17
February " ...	18	92,402	105,187		82.48	0.19	17.33	7.23	0.02	1.52	8.77
March " ...	26	97,525	103,543		81.16	0.80	18.04	7.35	0.07	1.64	9.06
April " ...	27	92,409	101,991		79.13	1.82	19.05	6.76	0.15	1.63	8.54
May " ...	25	99,021	107,677		78.43	2.95	18.62	6.67	0.25	1.59	8.51
June " ...	22	76,565	87,044		77.29	3.00	19.71	5.08	0.20	1.30	6.58
July " ..	18	55,434	61,861		80.53	1.04	18.43	3.83	0.05	0.88	4.76
August " ...	7	26,183	30,768		73.25	0.24	26.51	1.65	...	0.60	2.25
September " ...	6	10,225	18,363		70.59	...	29.41	0.62	...	0.26	0.88
October " ...	1	2,614	3,248		73.01	...	26.99	0.20	...	0.07	0.27
	29	64,169	121,896		80.54	1.61	17.85	4.77	0.09	1.06	5.92

4. The difficulty in procuring a suitable staff, sufficiency of tools, &c., which was felt more or less intensely throughout the Province, assumed formidable proportions in the two Chhattisgarh districts, Raipur and Bilaspur. It was not long before the programme of useful works relied upon at the first start became exhausted, and the problem of finding suitable employment for the growing numbers caused grave anxiety. The extensive area under operation and the remoteness of some of the distressed tracts added largely to the embarrassments of the situation. Small wonder then that the flood of workers in December and January destroyed all elements of discipline, and rendered the task of imposing real stringent labour-tests one of practical impossibility. The situation was saved by the temporary closure of public works to all new-comers, for whom employment was found on the village works in the meanwhile. Were it not for this expansion of village works and temporary restriction of relief on the public works, the Public Works Department organisation could not have been brought into anything like workable order. When once the works were systematically re-organised and the main essentials to the reality of the labour-test, *vis.*, fulfilment of adequate tasks and observance of strict discipline, were restored, no further difficulty was encountered in keeping the Public Works Department relief measures well in advance of all needs.

5. The system of carriage generally followed was by relays of workers as explained in Central Provinces Circular No. 4-F—1314, dated the 5th February 1900, but in some charges where it was found inconvenient to introduce it, the method of direct carrying from the quarry to the road was employed. Both systems worked well, but wherever the former was successfully introduced the general discipline and organisation were superior.

6. During the first month of Public Works Department relief operations there existed some misapprehension regarding the task-work system for the feeble and infirm. The exact scope and purport of the orders on the subject were not understood by the Officers-in-charge, who used their discretion in the matter too freely. But the mistake was soon corrected and the intermediate system was the one almost universally adopted throughout the district from December. In the earlier stages it was found sufficient to have a few 'infirm' gangs on minimum wages for the aged and infirm, who presented themselves at the works but were incapable of performing anything but a purely nominal task. About the middle of March, the number of the weakly seeking relief on the Public Works Department works rose to such an extent as to necessitate the formation of regular task-work gangs for them. All who were comparatively strong but unable to perform a full task (Class I) were, however, relegated to Class II and employed in the intermediate gangs. It was then too that special measures for the treatment of nursing mothers were brought into force; they were employed under the task-work system, and were given only four hours' light task daily.

The average proportion of workers and non-workers was as follows :—

Workers—

Intermediate	...	...	80.54
Task	...	...	1.61
Non-workers	...	...	17.85

It will be seen from the table in paragraph 3 that the proportion of dependants went on increasing steadily from 10.68 in November 1899 to 19.05 in April 1900. From May to July there was a slight fluctuation, but in August the proportion rose to 26.51 and was highest, *vis.*, 29.41, in September. This is partly explained by the fact that all working children were, under the Commissioner's orders, relieved in the kitchens from August, and were thus returned as gratuitously relieved; and partly by the fact that the number of Class (b) or outsiders was the largest in August, September and October.

7. The standard tasks for the district were—

Earthwork	...	...	80 to 120 cubic feet.
Metal-breaking	...	...	4½ to 6 cubic feet.

Tasks for Class II labourers when not employed on carrying were 50 to 75 per cent. of Class I tasks. In practice, however, tasks for earthwork had to be set according to the nature of soil, and for metal-breaking by actual experiment. In all cases tasks were gradually increased as the labourers got used to the works, slight relaxation being made for a short period during the hot weather, when cholera broke out almost everywhere in the district. The tasks were again raised on the rains setting in, the maximum task assigned at the later stages being 120 cubic feet in soft soil for Class I labourers. The proper exaction of tasks was a matter of some difficulty owing to the laziness and apathy of the workers and to the indifference of some of the Work Agents who were not properly qualified for their posts.

8. The condition of the workers was satisfactory. Ordinary forms of sickness and disease, such as fever, diarrhoea, ulcers and other skin diseases, were kept within normal limits by the enforcement of sanitary measures and supply of pure drinking water and food stuffs. Cholera assumed an epidemic form in all charges during April and May, but was fortunately stamped out before it claimed many victims. Thin children were fed on milk and other special diet. The supply of food-grains was ample throughout.

The total number of deaths registered on the works from the commencement to the close of operations was 1,477, of which 450 were due to cholera. The average relief population being 64,169, the total mortality on the works amounted to 23.02 per thousand from all causes, and 16.01 per thousand excluding cholera.

9. Every endeavour was made to obviate, as far as practicable, the multiplication of new roads of little or no utility. Orders of the Government of India were obtained for the inclusion of earthwork and ballast collection on the Bilaspur-Mungeli Feeder Railway in the programme of works. Surveys for several irrigation tank projects, for which the north-west tract of the district afforded scope, were taken in hand in February, and work on three tanks, viz., (1) Dularah, (2) Dhanras, (3) Hardi, was started in March. But owing to the outbreak of cholera and subsequent wholesale drafting of labourers to the railway work, much progress could not be made, before the commencement of the rains. Improvement of village tanks was also taken up as a useful supplement to certain road-work charges.

The distribution of the workers was as follows:—

Description of works.	Day-units.
Railways	2,548,533
Roads	15,194,787
Irrigation tanks	1,405,712
Village tanks	2,303,789

10. The quantity and description of work done were as follows:—

Railways—

Total length	30 miles.
„ earthwork	131.74 lakhs of cubic feet.
„ ballast collection	21.36 „

Irrigation works—

Total No.	3
„ earthwork	29.92 lakhs of cubic feet.
„ stone-pitching	0.58 „

Roads—

New roads (total length)	82 miles.
Raised in class („ „)	152 „
Repaired („ „)	22 „
Total earthwork	391.07 lakhs of cubic feet.
„ metal collection	91.89 „
„ moorum collection	126.44 „
„ consolidation	42.83 „

Village tanks—

Total No.	39
„ earthwork	197.82 lakhs of cubic feet.

The value of work done at normal rates is given below:—

Railways	1.70 lakhs of rupees.
Irrigation works	0.30 „
Road works	5.82 „
Village tanks	1.18 „
Other works	—
Total	9.00 „

11. The total expenditure incurred, on Public Works Department works was Rs. 23,51,950, thus :—

				Rs.
<i>Direct relief—</i>				
Wages	...	...	...	13,59,462
Gratuitous	...	...	...	1,76,100
Total				15,35,562
<i>Incidental charges—</i>				
Items of work done by contract	...	...	...	78,796
Special establishment	...	...	...	1,95,518
Other items	...	...	...	3,73,346
Tools and Plant	...	...	...	1,68,728
Total				8,16,388
GRAND TOTAL				23,51,950

The expenditure * on the different classes of work undertaken was as exhibited in the following table :—

Description of work.				Total number of day-units relieved.	Total expenditure on works only.	Total value of work done at normal rates.
				No.	Rs.	Rs.
Railways	...	...	...	2,548,533	1,93,542	1,69,778
Irrigation	...	...	...	1,405,712	98,915	30,063
Road works	...	...	...	15,194,787	11,57,590	5,82,483
Village tanks	...	...	...	2,303,789	1,64,311	1,18,188
Other works—Miscellaneous	...	...	...	.....	.....	.....
Total				21,452,821	16,14,358	9,00,512

* This includes "Works" only, viz.:—(1) Wages, (2) Gratuitous, (3) Items of work done by contract.

12. The cost of relief has been as follows, the average price of the cheapest food-grain during the period being $10\frac{1}{2}$ seers per rupee and the average wage-basis $11\frac{1}{2}$ seers :—

				No.	
No. of day-units relieved per rupee of expenditure on "Works" only				...	13
Do. do. total expenditure				...	9
<i>Cost per 1,000 day-units—</i>					
				Rs.	Percentage.
Direct relief	Wages	...	...	63'37	57'80
	Gratuitous	...	...	8'21	7'49
Total				71'58	65'29
<i>Incidental charges—</i>					
Items of work done by contract				3'67	3'35
Special establishment				9'11	8'31
Other items				17'40	15'87
Tools and Plant				7'87	7'18
Total				38'05	34'71
GRAND TOTAL				109'63	100'00

Cost on "Works" only, Rs. 75'25 or 68'64 per cent.

The average wages earned per worker-unit and the cost of relief per unit gratuitously relieved work out as follows :—

Persons relieved.	WAGES EARNED PER WORKER AND COST PER UNIT GRATUITOUSLY RELIEVED.		ALLOWANCE PERMISSIBLE UNDER THE GENERAL ORDER.		Remarks.	
	Pice.	Equivalent chhittaks of grain at 10½ seers per rupee (average market price of the cheapest grain).*	Chhittaks of grain.	Pice at 11½ seers per rupee (average wage basis).†		
WORKERS.						
Class I	...	62	162	19	7	* This is the average price of the cheapest grain, viz., the cheapest of wheat, rice and gram.
Class II	...	48	127	15	5	
Class III	...	30	78	8	3	
GRATUITOUS.						
Class IV	...	55	146	12	4	† The average wage-basis works out to 10 per cent. lower than the average price of the cheapest grain.
Class V	...	27	73	6	2	

Rates of famine to ordinary rates of work. 13. The ratios of famine to the ordinary contract rates stand thus :—

Works excluding gratuitous ...	...	Ratio.
Do. including do. ...	...	1 60
Total expenditure including all incidental charges	...	1 79
		2 61

14. Of the several classes of works undertaken, road work formed the principal item. In the earlier stages a comprehensive scheme comprising several new roads was hastily improvised to meet all possible demands for employment. Some of these roads would be useful as feeders to the Railway; others would help to open up the northern and the southern parts of the district, if completed. Out of 124 miles of new roads, which the enlarged programme thus included, about 82 have been embanked and moorumed generally. The most important of these are:—Pandaria-Lormi-Kotah (20 miles) and Nipania-Loharsi (19 miles.) In addition to the above, about 152 miles of roads which, according to the original Famine Programme of works, awaited completion or improvement were taken up, and a great deal of useful work has been done on them. Amongst those which the Commissioner recommends for completion the following are the more important, viz., (1) Mungeli-Setgunga, which will be useful as a feeder to the Bilaspur-Mungeli Railway in future, (2) Masturi-Sheorinarain Section of the Bilaspur-Sambalpur Road, an important district communication and railway feeder.

The Bilaspur-Mungeli Railway feeder line is undeniably the most useful work on which famine labour was employed in this district. All earthwork has been done, and a great deal of moorum collected and stacked along the line for preliminary ballasting. The three irrigation tank projects taken up, viz., (1) Dularah, (2) Dhanras and (3) Hardi, will be of great utility as protective works against famine. The work done during the present famine on two of them, viz., Dularah and Hardi, will, however, be of little use if the schemes are not fully carried out before long. The Dhanras Tank was abandoned before much progress had been made, as the labour was required on the more important railway work.

Casualties and Prosecutions.

15. There were two deaths in the field staff, viz., Corporal W. J. Riddock and Baboo Govind Sadaseo Sihdar, Officers-in-charge.

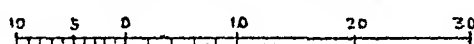
There was no criminal prosecution.

OF **LASPUR DISTRICT**

WORK DONE BY FAMINE LABOUR UNDER P.W.D.

1899 & 1900

Scale 1 Inch = 16 Miles



NOTE

Area in Square Miles.....8341

Population in 1891.....1164,158

REFERENCES

District.....	○ BILASPUR
Tahsili.....	△ Mungeli
Town.....	• Pandra
Class I Road.....	=====
do. II.....	=====
do. III B.....	=====
do. III A.....	-----
District Boundary.....	-----
do. Tahsili.....	.....
Railway Open.....	+++++
do. projected.....	+++ ++

REFERENCES TO WORK DONE BY FAMINE LABOUR

I- Railways

(i) New Railways

Earth-work.....	30 25 20
Ballast Collection.....	25 20 15

do. at quarries.....○

(ii) Improvements to existing Rlys.

Earth-work.....	20 15 10 5
Ballast Collection.....	25 20 15 10

do. at quarries.....○

II- Irrigation Tanks

Completed.....	□
Incomplete.....	□

III Road-Work

Embanked.....	25 20
Moorumed.....	25 20
Metalled with earthen sides.....	15 20
do. without do:.....	10 15

New roads.....N. R.

Raised in Glass.....R. C.

Repaired.....R. P.

Met at road sides.....

Moorum do.....

Met at quarries.....○

Moorum do:.....○

IV- Village Tanks

Completed.....◇

Incomplete.....◇

Famine Relief Camps.....①

BALAGHAT
 Rengakhar

SAMBALPUR DISTRICT.

Relief Operations under the Public Works Department from December 1899 to September 1900.

About the middle of December 1899 the Public Works Department was called upon to start the construction of the Bargarh-Bolangir Road under the ordinary rates and conditions of contract for providing employment for labour in the south-west tract of the district bordering on the Sonpur and Patna Feudatory States. Work was accordingly started on the 23rd December 1899, and carried on by contract until the 18th of March 1900, when numbers rose over 1,000, and it was converted into a relief-work by the opening of a relief charge at Barpali. This was closely followed by a second Public Works Department charge at Debra (26th March 1900) in the northern tract bordering on the district of Bilaspur. The average daily attendance on the two charges rose from about 1,100 at the end of March to over 6,800 in July, the maximum reached being 7,338 during the latter month. It was thought that no public works would be needed during the rains and that workers would disperse of their own accord on the burst of the monsoon. Both charges had, however, to be kept open till the 31st of July, when Barpali Camp No. 3 was closed. The operations under the Public Works Department came to an end on the 20th September 1900.

2. Only two charges were opened, the average and maximum daily attendance per charge being 1,673 and 4,196, or 1 in every 114 and 1 in every 45 of the affected population within the area served, respectively. The attendance for the whole district was 2,789 average daily, the maximum being 7,338.

Labour was employed entirely on the construction of new and the completion and improvement of old roads.

The total number of day-units relieved was 0·8 million, of whom 0·3 were men, 0·3 women and 0·2 children. The total expenditure amounted to 1·21 lakhs of rupees, of which 0·67 of a lakh was spent on direct relief.

3. The following table illustrates the main features of the attendance on the works month by month :—

Months.	Number of charges.	Average daily attendance.	Maximum daily attendance.	Proportion of men, women and children.	PROPORTION OF WORKERS AND DEPENDANTS.			PERCENTAGE OF WORKERS AND DEPENDANTS OVER AFFECTED POPULATION.			
					Inter-mediate.	Task.	Gratuitous.	Inter-mediate.	Task.	Gratuitous.	Total.
December 1899 ..	1	197	366	Men Women Children 38 36 24	...	...	...	...	...	...	...
January 1900 ...	1	431	1,194		...	...	...	...	...	...	...
February " ...	1	1,179	1,720		...	...	...	...	...	...	...
March " " ..	2	558	886		...	...	...	...	...	...	...
		512	532		94'21	...	5'79	0'14	...	0'01	0'15
April " ...	2	2,067	6,441		77'64	...	22'36	0'41	...	0'12	0'53
May " ...	2	5,305	6,365		80'81	...	19'19	1'11	...	0'26	1'37
June " ...	2	5,208	6,139		78'50	...	21'50	1'05	...	0'29	1'34
July " ...	2	6,844	7,338		76'14	0'73	23'13	1'34	0'01	0'41	1'76
August " ...	1	2,799	3,351		61'82	...	38'18	0'40	...	0'25	0'65
September " ...	1	1,405	1,680		59'52	...	40'48	0'20	...	0'13	0'33
	2	2,789	7,338	...	77'16	0'17	22'67	0'57	0'01	0'16	0'74

NOTE.—Work done by ordinary Public Works Department contract from 23rd December 1899 to 23rd March 1900.

4. As mentioned above ordinary Public Works Department works were enlarged for providing relief in the earlier stages. The two Public Works Department relief charges subsequently opened were conducted entirely

Organisation. on the lines of the General Order. The charges did not fill rapidly and ample work was always available. If there was any difficulty in maintaining an efficient organisation throughout, it was due to fluctuation of numbers on the works, which depended mainly on the presence or absence in greater or less degree of cholera in the charges or in their neighbourhood.

5. The intermediate system was adopted from the commencement. It was only for a couple of weeks in July that the formation of a few separate gangs on the task-work system was found necessary for the weakly and the nursing mothers. The proportion of dependants rose from 5.79 per cent. in March to 22.36 in April, and after slight fluctuations during the next three months rose in August to 38.18 per cent., attaining its maximum (40.48) in September. This was due mainly to the orders of the Commissioner regarding the substitution of cooked food in the kitchens for cash wages to working children, Class III, who were consequently shown as "gratuitously" relieved in August and September, instead of appearing as "workers" in the returns. The average proportion of workers and non-workers was as follows:—

Workers—				
Intermediate	...	...	...	77.16
Task	...	...	...	0.17
Non-workers	...	...	...	22.67
Total				100.00

The tasks fixed were 80 to 120 cft. of earthwork and 40 to 60 cft. of moorum digging according to the nature of soil and degree of hardness, &c.: they were raised to the maximum limit after the monsoon had set in so as to make the works as unattractive as possible. There was on the whole no difficulty in exacting adequate tasks from the workers.

6. Cholera broke out at Debra almost immediately after the opening of the charge, was prevalent in both the camps in May and June, and subsided in July. Food and water-supplies were sufficient throughout. Condition of workers. The total number of deaths registered on the Public Works Department works was 217, of which 134 were due to cholera. The average relief population being 2,789, the total mortality on the works during the 7 months, March 1900 to September 1900, was 77.81 *per mille* from all causes and 29.8 excluding cholera.

The high mortality was due to the admission of new-comers from villages where cholera was raging.

- Work done by famine labour. 7. Famine labour was wholly employed on road work:—

Description of work.	Total day-units employed.
Road work	777,822

The quantity of work done was as follows:—

Roads—

New roads (total length)	...	...	...	21 miles.
Repaired	...	...	...	7 "
Total earthwork	...	...	...	76.29 lakhs of cubic feet.
" moorum collection	...	...	...	11.20 "
" consolidation	...	...	...	10.16 "

- Expenditure on relief. 8. The total expenditure incurred on Public Works Department works amounted to Rs. 1,21,181, thus:—

Expenditure on "Works" = Rs. 76,991.		Direct Relief—		Rs.
		1. Wages	...	56,365
		2. Gratuitous	...	10,807
		Total	...	67,172
		Incidental Charges—		
		3. Items of work done by contract	...	9,819
		4. Special establishment	...	10,430
		5. Other items	...	25,710
		6. Tools and Plant	...	8,050
		Total	...	54,009
		GRAND TOTAL	...	1,21,181

The expenditure * on works was as shown below:—

Description of work.	Total No. of day-units relieved.	Total expenditure on works only.	Total value of work done at normal rates.
Road work	777,822	76,991	42,359

* This includes "Works" only, viz :—(1) Wages, (2) Gratuitous, (3) Items of work done by Contract.

9. The actual cost of relief has been as given below, the average price of the cheapest food-grain during the famine being 10 seers per rupee, and the average wage-basis 10 seers :—

No. of day-units relieved per rupee of expenditure on works only	No.
Do. do. total expenditure	10
	6
Cost per 1,000 day-units—	
Direct relief	Rs. Percentage.
{ Wages ...	72'47 46'52
{ Gratuitous ...	13'89 8'92
Total	86'36 55'44
Incidental charges—	
Items of work done by contract ...	12'62 8'10
Special establishment ...	13'41 8'61
Other items ...	33'05 21'21
Tools and Plant ...	10'35 6'64
Total	69'43 44'56
GRAND TOTAL	155'79 100'00

The average wages earned per worker-unit and the cost per unit gratuitously relieved were approximately as follows :—

Persons relieved.	WAGES EARNED PER WORKER AND COST PER UNIT GRATUITOUSLY RELIEVED.		ALLOWANCE PERMISSIBLE UNDER THE GENERAL ORDER.		Remarks.
	Pice.	Equivalent chhittaks of grain at 10 seers per rupee (average market price of cheapest grain).*	Chhittaks of grain.	Pice at 10 seers per rupee (average wage-basis).	
WORKERS.					
Class I	...	7'3	18'2	19	8
Class II	...	5'7	14'2	15	6
Class III	...	3'0	7'5	8	3
GRATUITOUS.					
Class IV	...	6'2	15'5	12	5
Class V	...	3'1	7'8	6	3

* This is the average price of the cheapest grain, viz., the cheapest of wheat, rice and gram.

The workers earned very nearly their full wages. The cost of gratuitous relief was high in consequence of the prevalence of sickness in the camps.

Ratio of famine to ordinary rates of work.

10. The ratio of famine to ordinary Public Works Department rates is as follows :—

	Ratio.
Works excluding gratuitous	1'56
,, including ,,	1'82
Total expenditure including all charges	2'86

11. The only works carried out are (1) the construction of the Bargarh-Bolangir Road, portion lying in the Khalsa territory, a road of altogether first class utility and importance; (2) Debra-Khursia Road, a useful feeder to the Railway, and (3) Debra-Chandarpur Section of Bilaspur-Sambalpur Road, a district communication of some importance.

12. There were two prosecutions in the district, *viz.*, that of an Officer-in-charge and a Gang Muharrir for misappropriating Government money and criminal breach of trust, of whom the Gang Muharrir was sentenced to six months' rigorous imprisonment with a fine of Rs. 250, but no trace could be found of the Officer-in-charge who had absconded. There was one death among the field staff, *viz.*, an Officer-in-charge.



APPENDIX A TO THE FAMINE REPORT, PUBLIC WORKS
DEPARTMENT SECTION.

Statistical Account of Work done and Expenditure incurred on
Relief Works, from October 1899 to October 1900, under the
Public Works Department, arranged by Districts and
Civil Divisions.

APPENDIX A to the Famine Report,

Statistical Account of Work done and Expenditure incurred on Relief Works, from October 1899 to

Serial No	Particulars		Jubbulpore Civil Division.					
			Jubbulpore.	Seoni	Mandla.	Saugor.	Damoh.	Totals and averages for Jubbulpore Division.
	I.—AREA, POPULATION, AND DURATION OF OPERATIONS.							
1	(a) Area of district	Sq. miles.	3,948	3,198	5,056	4,007	..	16,209
2	(b) „ affected	„	3,948	3,198	5,056	4,007	...	16,209
3	(c) Population of district	Thou- sands	748	371	339	592	...	2,050
4	(d) „ affected (Average)	„	574	265	166	368	...	1,373
5	(e) „ „ (Highest)	„	748	371	339	592	...	2,050
6	(f) Duration of operations	Months	12	12	6	12	...	12
	II.—NUMBERS ON RELIEF.							
	(a) Total day-units relieved—Intermediate—							
7	„ „ Class I including Special	Thou- sands.	832	981	92	663	...	2,568
8	„ „ „ II Men	„	230	204	...	326	...	760
9	„ „ „ II Women	„	1,652	1,559	168	1,496	...	4,875
10	„ „ „ III Children	„	380	406	28	574	...	1,388
11	TOTAL INTERMEDIATE	„	3,094	3,150	288	3,059	...	9,591
	Task-work—							
12	„ „ Class I including Special	„	25	12	...	4	...	41
13	„ „ „ II Men	„	20	8	...	23	...	51
14	„ „ „ II Women	„	118	82	...	74	...	274
15	„ „ „ III Children	„	29	8	...	22	...	59
16	TOTAL TASK-WORK	„	192	110	...	123	...	425
	Gratuitous—							
17	„ „ Class IV Adults	„	3	9	...	37	..	49
18	„ „ „ V Children	„	297	376	...	383	...	1,056
19	TOTAL GRATUITOUS	„	300	385	...	420	...	1,105
20	„ „ TOTAL MEN	„	1,108	1,209	92	1,028	...	3,437
21	„ „ „ WOMEN	„	1,772	1,646	168	1,595	...	5,181
22	„ „ „ CHILDREN	„	706	790	28	979	...	2,503
23	GRAND TOTAL	„	3,586	3,645	288	3,602	...	11,121

Public Works Department Section.

October 1900, under the Public Works Department (arranged by Districts and Civil Divisions).

Nagpur Civil Division.						Nerbudda Civil Division.						Chhattisgarh Civil Division.						TOTALS AND AVERAGES FOR CENTRAL PROVINCES.
Nagpur.	Wardha.	Chanda.	Bhandara.	Balaghat	Totals and averages for Nagpur Division.	Hoshangabad	Betul.	Nimar.	Narsinghpur.	Chhindwara.	Totals and averages for Nerbudda Division.	Raipur.	Bilaspur.	Sambalpur.	Totals and averages for Chhattisgarh Division.			
3,832	2,428	10,749	3,968	3,164	24,141	4,024	3,824	3,928	1,916	4,630	18,322	11,724	8,341	4,948	25,013	83,685		
3,832	2,428	10,749	3,968	3,164	24,141	4,024	3,824	3,928	1,916	4,630	18,322	11,724	8,341	3,102	23,167	81,839		
758	400	697	742	383	2,980	499	323	286	367	407	1,882	1,584	1,164	796	3,544	10,456		
356	400	673	742	383	2,554	499	323	286	345	375	1,828	1,512	1,084	379	2,975	8,730		
758	400	697	742	383	2,980	499	323	286	367	407	1,882	1,584	1,164	429	3,177	10,089		
12	12	12	12	12	12	12	12	12	3	12	12	12	12	7	12	12		
1,229	2,787	3,972	4,022	2,367	14,377	1,667	3,475	1,158	44	2,685	9,029	11,252	4,332	201	15,785	41,759		
367	831	1,217	1,727	2,153	6,295	604	611	360	6	419	2,000	3,175	2,207	69	5,451	14,506		
2,160	4,678	6,944	6,529	5,502	25,813	3,057	5,708	1,662	73	4,178	14,678	17,858	8,493	274	26,625	71,991		
527	1,402	1,877	2,347	1,955	8,108	1,063	1,695	713	21	1,125	4,617	4,346	2,245	56	6,647	20,760		
4,283	9,698	14,010	14,625	11,977	54,593	6,391	11,489	3,893	144	8,407	30,324	36,631	17,277	600	54,508	149,016		
...	12	1	5	1	19	18	46	392	...	184	640	296	36	...	332	1,032		
..	13	6	1	8	28	4	19	130	...	25	178	277	60	...	337	594		
..	68	33	10	18	129	22	126	657	...	193	998	1,055	199	1	1,255	2,656		
...	14	5	2	3	24	8	19	273	...	48	348	196	51	...	247	678		
..	107	45	18	30	200	52	210	1,452	...	450	2,164	1,824	346	1	2,171	4,960		
47	123	189	100	31	490	64	45	143	1	76	329	782	228	47	1,057	1,925		
523	1,650	2,044	1,575	1,215	7,007	1,136	1,864	1,507	14	1,670	6,191	6,021	3,602	130	9,753	24,007		
570	1,773	2,233	1,675	1,246	7,497	1,200	1,909	1,650	15	1,746	6,520	6,803	3,830	177	10,810	25,932		
1,616	3,697	5,277	5,802	4,541	20,933	2,320	4,153	2,107	50	3,346	11,976	15,346	6,734	294	22,374	58,720		
2,187	4,815	7,084	6,592	5,539	26,217	3,116	5,877	2,395	74	4,414	15,876	19,349	8,821	298	28,468	75,742		
1,050	3,066	3,927	3,924	3,173	15,140	2,207	3,578	2,493	35	2,843	11,156	10,563	5,898	186	16,647	45,446		
4,853	11,578	16,288	16,318	13,253	62,290	7,643	13,608	6,995	159	10,603	39,008	45,258	21,453	778	67,489	179,908		

Statistical Account of Work done and Expenditure incurred on Relief Works, from October 1899 to

Serial No.	Particulars.			Jubbulpore Civil Division.					
				Jubbulpore.	Seoni.	Mandla.	Saugor.	Damoh.	Totals and averages for Jubbulpore Division.
	II.—NUMBERS ON RELIEF.—(Concl'd)								
24	(b) Daily attendance on relief-works—(Average) ...	Thou-	sands.	10 8	11'1	1'6	11'7	...	35'2
25	" " (Highest) ...	"		24'3	27'8	3'4	22'0	...	77'5
26	(c) Proportion of workers and non-workers—Intermediate.	Percent-	age.	87'00	86'00	100'00	85'00	...	86'23
27	" " Task ...	"		5 00	3'00	...	3 00	...	3'83
28	" " Gratuitous...	"		8 00	11'00	...	12'00	...	9'94
29	(d) Average percentage of affected population on different forms of relief—	"		1'64	3'61	0'95	2 70	...	2'22
30	" " Task ...	"		0'10	0'13	...	0'11	...	0'10
31	" " Gratuitous ..	"		0'15	0'46	...	0'37	...	0 25
32	" " TOTAL ...	"		1 89	4'20	0'95	3 18	...	2'57
33	(e) Highest " " at any time ...	"		5'39	10'28	1'00	8 47	...	3'78
	III.—RELIEF CHARGES.								
34	(a) Total number of charges ...	No.		5	6	1	11	...	23
35	(b) Affected area served per charge ...	Sq.miles.		790	533	700	364	...	597
36	(c) " population served per charge (Average) ...	Thou-	sands.	115	20	48	33	...	54
37	(d) Daily attendance per charge (Average) ...	"		3'0	3'1	1'6	2'2	...	2'5
38	" " (Highest) ...	"		7'0	11'1	3'4	12'0	...	12'0
39	(e) Distance from charge to furthest village served (Average).	Miles.		4	6	3	5	...	4
40	" " (Maximum) ...	"		22	20	5	40	...	40
	IV.—EXPENDITURE ON RELIEF.								
41	(a) Direct relief—Wages ...	Lakhs of	Rs.	2'06	2'50	0'26	2'23	...	7'05
42	" " Gratuitous ...	"		0'05	0'10	...	0'14	...	0'29
43	TOTAL DIRECT RELIEF ...	"		2'11	2'60	0'26	2'37	...	7'34

DIX A.

October 1900, under the Public Works Department (arranged by Districts and Civil Divisions).—(Contd.)

Nagpur Civil Division.						Nerbudda Civil Division.						Chhattisgarh Civil Division.				TOTALS AND AVERAGES FOR CENTRAL PROVINCES
Nagpur.	Wardha.	Chanda.	Bhandara.	Balaghat.	Totals and averages for Nagpur Division.	Hoshangabad.	Betul.	Nimar.	Narsinghpur.	Chhindwara.	Totals and averages for Nerbudda Division.	Raipur.	Bilaspur.	Sambalpur.	Totals and averages for Chhattisgarh Division.	
149	333	451	475	388	1796	243	423	223	19	307	1215	1312	642	28	1982	5345
391	656	1095	808	644	3594	355	690	370	46	673	2134	2434	1219	73	3726	8978
8800	8380	8601	8962	9037	8764	8362	8443	5565	9040	7929	7774	8094	8054	7716	8076	8283
...	090	028	011	023	032	068	154	2076	...	424	555	403	161	017	322	276
1200	1530	1371	1027	940	1204	1570	1403	2359	960	1647	1671	1503	1785	2267	1602	1441
368	698	576	573	917	616	407	1106	434	050	648	516	703	477	057	538	507
...	007	002	001	002	002	003	020	162	...	035	037	035	009	001	021	017
050	128	092	066	095	085	076	184	184	005	134	111	130	106	016	107	088
418	833	670	640	1014	703	486	1310	780	055	817	664	868	592	074	666	612
1097	1639	1571	1089	1682	1206	712	2043	1292	125	1280	1134	1537	1047	189	1173	889
11	10	16	12	11	60	8	12	10	2	12	44	56	29	2	87	214
348	243	672	331	288	376	503	319	393	958	386	512	209	288	1551	683	342
51	40	42	62	35	46	62	27	29	172	31	64	27	37	190	85	62
32	50	44	53	50	46	41	42	33	08	39	33	52	41	17	36	35
307	100	206	111	115	206	96	86	100	24	145	145	201	213	42	213	213
4	5	13	16	15	11	5	6	5	15	6	7	3	5	30	13	9
101	15	20	30	30	30	20	20	20	20	25	25	5	20	40	40	40
337	779	1170	1093	947	4326	462	1017	383	011	732	2605	3007	1359	056	4422	12058
019	070	100	066	041	296	034	054	050	001	058	197	267	176	011	454	976
356	849	1270	1159	988	4622	496	1071	433	012	790	2802	3274	1535	067	4876	13034

Statistical Account of Work done and Expenditure incurred on Relief Works, from October 1899 to

Serial No.	Particulars.		Jubbulpore Civil Division					
			Jubbulpore.	Seoni.	Mandla.	Saugor.	Damoh.	Totals and averages for Jubbulpore Division.
	IV.—EXPENDITURE ON RELIEF.—(Concl'd)							
44	(b) Incidental Charges—Items of work done by contract.	Lakhs of Rs.	0 06	0 03	0 02	0 05	...	0 21
45	Special establishment ...	"	0 28	0 35	0 02	0 39	..	1 04
46	Other items ...	"	0 35	0 26	0 02	0 62	..	1 25
47	Tools and Plant ...	"	0 19	0 24	0 02	0 23	...	0 68
48	TOTAL INCIDENTAL CHARGES ...	"	0 88	0 93	0 08	1 29	...	3 18
49	GRAND TOTAL EXPENDITURE ON RELIEF	"	2 99	3 53	0 34	3 66	.	10 52
	V.—COST OF RELIEF.							
	A.—Actual.							
50	(a) Number of day units relieved per rupee. Works only	No	16	14	11	15	...	14
51	Ditto ditto. including all Charges...	"	12	10	9	10	...	10
52	(b) Cost per 1,000 day units—Direct relief—Wages	Rs	57 00	69 00	90 20	62 00	...	63 29
53	" " Gratuitous ...	"	1 40	3 00	..	4 00	...	2 69
54	TOTAL DIRECT RELIEF ...	"	58 40	72 00	90 20	66 00	...	65 98
	Incidental Charges—							
55	" Items of work done by contract	"	2 00	2 00	5 53	1 00	...	1 86
56	" Special establishment ...	"	8 00	10 00	4 97	11 00	...	9 30
57	" Other items ..	"	10 00	7 00	7 41	17 00	.	11 30
58	" Tools and Plant ...	"	5 00	6 00	8 35	7 00	...	6 16
59	TOTAL INCIDENTAL CHARGES ...	"	25 00	25 00	25 26	36 00	..	28 62
60	GRAND TOTAL COST PER 1,000 DAY-UNITS	"	83 40	97 00	116 46	102 00	..	94 60
	(c) Percentage of cost per 1,000 day-units							
61	" Direct relief—Wages ...	Percentage.	68 30	71 00	77 46	61 00	...	66 90
62	" " Gratuitous ...	"	1 70	3 00	...	4 00	...	2 84
63	TOTAL DIRECT RELIEF ...	"	70 00	74 00	77 46	65 00	...	69 74
	Incidental Charges—							
64	" Items of work done by contract	"	2 40	2 00	4 75	1 00	...	1 97
65	" Special establishment ...	"	9 60	11 00	4 26	11 00	...	9 83
66	" Other items ...	"	12 00	7 00	6 36	17 00	...	11 95
67	" Tools and Plant ...	"	6 00	6 00	7 17	6 00	...	6 51
68	TOTAL INCIDENTAL CHARGES...	"	30 00	26 00	22 54	35 00	...	30 26

DIX A.

October 1900, under the Public Works Department (arranged by Districts and Civil Divisions).—(Contd.)

Nagpur Civil Division.						Nerbudda Civil Division.						Chhattisgarh Civil Division.				TOTALS AND AVERAGES FOR CENTRAL PROVINCES.
Nagpur.	Wardha.	Chanda.	Bhandara.	Balaghat.	Totals and averages for Nagpur Division.	Hoshangabad.	Betul.	Nimar.	Narsinghpur.	Chhindwara.	Totals and averages for Nerbudda Division.	Raipur.	Bilaspur.	Sambalpur.	Totals and averages for Chhattisgarh Division.	
0'51	0'60	0'59	0'34	0'41	2'45	0'79	0'08	0'22	0'02	0'26	1'37	3'50	0'79	0'10	4'39	8'42
0'39	0'57	1'04	0'96	1'07	4'03	0'83	0'88	0'89	0'11	0'59	3'30	3'10	1'96	0'10	5'16	13'53
1'29	2'54	3'02	0'55	0'41	7'81	1'68	1'74	1'70	0'15	1'20	6'47	7'21	3'73	0'26	11'20	26'73
0'43	0'90	1'27	0'85	0'41	3'86	0'75	1'53	0'72	0'05	0'43	3'48	3'79	1'69	0'08	5'56	13'58
2'62	4'61	5'92	2'70	2'30	18'15	4'05	4'23	3'53	0'33	2'48	14'62	17'60	8'17	0'54	26'31	62'26
6'18	13'10	18'62	14'29	12'18	64'37	9'01	14'54	7'86	0'45	10'38	42'64	50'34	23'52	1'21	75'07	192'60
12	13	12	14	13	13	13	13	15	12	13	13	12	13	10	12	13
8	9	9	11	11	10	8	9	9	4	10	8	9	9	6	8	9
69'40	67'26	71'88	67'00	71'43	69'45	60'40	74'73	54'74	68'36	69'04	66'77	66'45	63'37	72'47	65'54	67'02
4'00	6'07	6'10	4'06	3'11	4'76	4'40	3'96	7'09	2'41	5'46	5'00	5'90	8'21	13'89	6'73	5'42
73'40	73'33	78'98	71'05	74'54	74'21	64'80	78'69	61'83	70'77	74'50	71'77	72'35	71'58	86'36	72'27	72'44
10'50	5'16	3'64	2'10	3'10	3'94	10'40	0'61	3'10	13'45	2'45	3'53	7'74	3'67	12'62	6'50	4'68
8'10	4'92	6'37	5'90	8'08	6'48	10'90	6'42	12'68	67'93	5'63	8'44	6'86	9'11	13'41	7'65	7'52
26'50	21'91	18'51	3'35	3'07	12'50	22'00	12'81	24'40	92'59	11'31	16'61	15'93	17'40	33'05	16'60	14'86
8'70	7'83	7'82	5'21	3'07	6'20	9'80	11'24	10'29	32'93	4'05	8'93	8'37	7'87	10'35	8'23	7'55
53'80	39'82	36'34	16'56	17'32	29'12	53'10	31'08	50'47	206'90	23'44	37'51	38'90	38'05	69'43	38'98	34'61
127'20	113'15	114'32	87'62	91'85	103'33	117'90	109'77	112'30	277'67	97'94	109'28	111'25	109'63	155'79	111'25	107'05
54'60	59'44	62'88	76'47	77'76	67'21	51'20	68'08	48'75	24'62	70'50	61'10	59'73	57'80	46'52	58'91	62'61
3'10	5'37	5'34	4'63	3'39	4'61	3'70	3'61	6'31	0'87	5'57	4'58	5'30	7'49	8'92	6'05	5'07
57'70	64'81	68'22	81'10	81'15	71'82	54'90	71'69	55'06	25'49	76'07	65'68	65'03	65'29	55'44	64'96	67'68
8'30	4'56	3'18	2'46	3'37	3'81	8'80	0'55	2'76	4'84	2'50	3'23	6'96	3'35	8'10	5'84	4'37
6'40	4'35	5'57	6'73	8'80	6'27	9'30	5'85	11'29	24'46	5'75	7'72	6'17	8'31	8'61	6'88	7'02
20'80	19'36	16'19	3'82	3'34	12'10	18'70	11'67	21'73	33'35	11'55	15'20	14'32	15'87	21'21	14'92	13'88
6'80	6'92	6'84	5'95	3'34	6'00	8'30	10'24	9'16	11'86	4'13	8'17	7'52	7'18	6'64	7'40	7'05
42'30	35'19	31'78	18'90	18'85	28'18	45'10	28'31	44'94	74'51	23'93	34'32	34'97	34'71	44'56	35'04	32'32

Statistical Account of Work done and Expenditure incurred on Relief Works, from October 1899 to

Serial No.	Particulars.		Jubbulpore Civil Division.					
			Jubbulpore.	Seoni.	Mandla.	Sauger.	Damoh.	Totals and averages for Jubbulpore Division.
	V.—COST OF RELIEF.—(Contd.)							
	B.—Reduced to uniform 10 seer-basis.							
	(d) Cost per 1,000 day-units—Direct relief—							
69	Wages (reduced to a uniform 10 seer wage-basis.)	Rs.	77 00	82 80	94 71	74 40	...	75 95
70	Gratuitous (reduced to a uniform 10 seer market price).	"	1 68	3 15	...	4 40	...	2 69
71	TOTAL DIRECT RELIEF ...	"	78 68	85 95	94 71	78 80	...	78 64
	Incidental Charges—							
72	Items of work done by contract ...	"	2 00	2 00	5 53	1 00	...	1 86
73	Special establishment ...	"	8 00	10 00	4 97	11 00	...	9 30
74	Other items ...	"	10 00	7 00	7 41	17 00	...	11 30
75	Tools and Plant ...	"	5 00	6 00	8 35	7 00	...	6 16
76	TOTAL INCIDENTAL CHARGES ...	"	25 00	25 00	26 26	36 00	...	28 62
77	GRAND TOTAL COST PER 1,000 DAY-UNITS.	"	103 68	110 95	120 97	114 80	...	107 26
	(e) Percentage of cost per 1,000 day-units—Direct relief—							
78	Wages (reduced to a uniform 10 seer wage-basis).	Percentage.	74 27	74 63	78 29	64 81	...	70 81
79	Gratuitous (reduced to a uniform 10 seer market price.)	"	1 62	2 84	...	3 83	...	2 51
80	TOTAL DIRECT RELIEF ...	"	75 89	77 47	78 29	68 64	...	73 32
	Incidental Charges—							
81	Items of work done by contract ...	"	1 93	1 80	4 57	0 87	...	1 73
82	Special establishment ...	"	7 72	9 01	4 11	9 58	...	8 67
83	Other items ...	"	9 64	6 31	6 13	14 81	...	10 54
84	Tools and Plant ...	"	4 82	5 41	6 90	6 10	...	5 74
85	TOTAL INCIDENTAL CHARGES ...	"	24 11	22 53	21 71	31 36	...	26 68

DIX A.

October 1900, under the Public Works Department (arranged by Districts and Civil Divisions).—(Contd.)

Nagpur Civil Division.						Nerbudda Civil Division.						Chhattisgarh Civil Division.				TOTALS AND AVERAGES FOR CENTRAL PRO.
Nagpur.	Wardha.	Chanda.	Bhandara.	Balaghat.	Totals and averages for Nagpur Division.	Hoshangabad.	Betul.	Nimar.	Narsinghpur.	Chhindwara.	Totals and averages for Nerbudda Division.	Raipur.	Bilaspur.	Sambalpur.	Totals and averages for Chhattisgarh Division.	
72'87	77'35	71'88	70'35	75'00	76'39	66'44	70'99	54'74	82'03	75'94	73'44	76'41	72'87	72'47	72'09	73'11
4'00	6'37	5'79	3'85	2'95	4'76	4'40	3'56	6'73	2'41	5'19	5'00	6'19	8'62	13'89	6'73	5'11
76'87	83'72	77'67	74'20	77'95	81'15	70'84	74'55	61'47	84'43	81'13	78'44	82'60	81'49	86'36	78'82	79'14
10'50	5'16	3'64	2'10	3'10	3'94	10'40	0'61	3'10	13'45	2'45	3'53	7'74	3'67	12'62	6'50	4'68
8'10	4'92	6'37	5'90	8'08	6'48	10'90	6'42	12'68	67'93	5'63	8'44	6'86	9'11	13'41	7'65	7'52
26'50	21'91	18'51	3'35	3'07	12'50	22'00	12'81	24'40	92'59	11'31	16'61	15'93	17'40	33'05	16'60	14'86
8'70	7'83	7'82	5'21	3'07	6'20	9'80	11'24	10'29	32'93	4'05	8'93	8'37	7'87	10'35	8'23	7'55
53'80	39'82	36'34	16'56	17'32	29'12	53'10	31'08	50'47	206'90	23'44	37'51	38'90	38'05	69'43	38'98	34'61
130'67	123'54	114'01	90'76	95'27	110'27	123'94	105'63	111'94	291'33	104'57	115'95	121'50	119'54	155'79	117'80	113'73
55'77	62'61	63'05	77'51	78'72	69'27	53'61	67'20	48'90	28'16	72'62	63'34	62'89	60'96	46'52	61'20	64'8
3'06	5'16	5'08	4'24	3'10	4'32	3'55	3'37	6'01	0'83	4'96	4'31	5'09	7'21	8'92	5'71	4'7
58'83	67'77	68'13	81'75	81'82	73'59	57'16	70'57	54'91	28'99	77'58	67'65	67'98	68'17	55'44	66'91	69'5
8'03	4'18	3'19	2'32	3'26	3'57	8'39	0'58	2'77	4'61	2'34	3'04	6'37	3'07	8'10	5'52	4'1
6'20	3'98	5'59	6'50	8'48	5'88	8'79	6'08	11'33	23'32	5'39	7'28	5'65	7'62	8'61	6'49	6'6
20'28	17'73	16'23	3'69	3'22	11'34	17'75	12'13	21'80	31'78	10'82	14'33	13'11	14'56	21'21	14'09	13'0
6'66	6'34	6'86	5'74	3'22	5'62	7'91	10'64	9'19	11'30	3'87	7'70	6'89	6'58	6'64	6'99	6'6
41'17	32'23	31'87	18'25	18'18	26'41	42'84	29'43	45'09	71'01	22'42	32'35	32'02	31'83	44'56	33'09	30'2

Statistical Account of Work done and Expenditure incurred on Relief Works, from October 1899 to

Serial No.	Particulars.	Jubbulpore Civil Division.						Totals and averages for Jubbulpore Division.
		Jubbulpore.	Seoni.	Mandla.	Saugor.	Damoh.		
V.—COST OF RELIEF—(Concl'd.)								
86	(f) Wages earned per worker unit—Class I (Cash)...	Pice.	4'9	6'0	7'0	5'7	...	5'9
87	" " " (Equivalent grain)	Chittaks.	14'7	15'8	14'0	15'7	...	15'0
88	" " Class II (Cash) ...	Pice.	3'9	4'7	5'5	4'5	...	4'6
89	" " " (Equivalent grain).	Chittaks.	11'7	12'3	11'1	12'4	...	11'9
90	" " Class III (Cash) ...	Pice.	2	3	3	3	...	3
91	" " " (Equivalent grain).	Chittaks.	6'0	7'8	6'0	8'2	...	7'0
92	(g) Cost of gratuitous relief—Class IV (Cash) ...	Pice.	3'2	4'8	...	5'6	...	4'5
93	" " " (Equivalent grain)	Chittaks.	9'6	12'8	...	15'4	...	12'6
94	" " Class V (Cash-average).	Pice.	1'1	1'6	...	1'9	...	1'5
95	" " " (Equivalent grain).	Chittaks.	3'2	4'0	...	5'2	...	4'1
VI.—WORK DONE.								
(a)—RAILWAYS—								
96	Earthwork (Total quantity) ...	Lakhs of Cft.	...	52'51	...	...	...	52'51
97	Ballast (" ") ...	"	3'28	0'52	...	...	...	3'80
98	(b)—IRRIGATION WORKS— Total No. ...	No.	4	...	...	...	...	4
99	Earthwork (Total quantity) ...	Lakhs of Cft.	38'19	...	...	...	...	38'19
100	Stone pitching (" ") ...	"	0'10	...	...	...	...	0'10
101	Masonry ( " " ) ...	"	...	...	...	...	...	...
102	Miscellaneous (Total value) ...	Lakhs of Rs.	...	...	...	...	...	...
(c)—WATER-SUPPLY—								
103	Earthwork (Total quantity) ...	Lakhs of Cft.	...	17'41	...	...	...	17'41
104	Stone pitching (" ") ...	"	...	0'33	...	...	...	0'33
105	Masonry (" ") ...	"	...	0'04	...	...	...	0'04
106	Miscellaneous (Total value) ...	Lakhs of Rs.	...	0'16	...	...	...	0'16
107	(d)—ROAD WORKS—New roads (Total length) ...	Miles.	44	35	25	...	...	104
108	Raised in class (" ") ...	"	43	37	18	45	...	143
109	Roads repaired (" ") ...	"	4	31	30	7	...	72
110	Earthwork (Total quantity) ...	Lakhs of Cft.	139'78	17'04	23'10	11'87	...	191'79
111	Metal collection (" ") ...	"	5'85	6'42	...	13'20	...	25'47
112	Moorum (" ") ...	"	44'28	10'89	13'96	14'32	...	83'45
113	Consolidation (" ") ...	"	21'51	9'87	13'55	9'64	...	44'57
114	Miscellaneous (Total value) ...	Lakhs of Rs.	0'03	0'11	0'05	...	...	0'19
115	(e)—VILLAGE TANKS— (Total No.) ...	No.	29	37	...	7	...	73
116	Earthwork (Total quantity) ...	Lakhs of Cft.	78'64	165'19	...	188'84	...	432'67
117	Miscellaneous (Total value) ...	Lakhs of Rs.	...	...	...	0'01	...	0'01
118	(f)—OTHER WORKS—Miscellaneous ( " " ) ...	"	...	...	0'04	...	...	0'04

October 1900, under the Public Works Department (arranged by Districts and Civil Divisions).—(Contd.)

Nagpur Civil Division.						Nerbudda Civil Division.						Chhattisgarh Civil Division						TOTALS AND AVERAGES FOR CENTRAL PRO- VINCES.
Nagpur.	Wardha.	Chanda.	Bhandara.	Balaghat.	Totals and averages for Nagpur Div- ision	Hoshangabad.	Betul.	Nimar.	Narsinghpur.	Chhindwara.	Totals and averages for Nerbudda Div- ision	Raipur.	Bilaspur.	Sambalpur.	Totals and averages for Chhattisgarh Division.			
6'2	6'3	6'6	5'9	6'5	6'3	5'7	7'0	5'7	6'0	6'5	6'2	6'1	6'2	7'3	6'5	6'2		
15'5	16'5	15'7	14'1	15'4	15'4	14'2	15'6	13'6	15'0	15'4	14'8	16'0	16'2	18'2	16'8	15'4		
4'9	5'0	5'2	4'7	5'1	5'0	4'5	5'5	4'5	4'7	5'1	4'9	4'8	4'8	5'7	5'1	4'9		
12'2	13'1	12'4	11'2	12'1	12'2	11'2	12'4	10'7	11'8	12'1	11'6	12'7	12'7	14'2	13'2	12'1		
3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3		
7'5	7'9	7'1	7'1	7'1	7'3	7'5	6'8	7'1	7'5	7'1	7'2	7'9	7'8	7'5	7'7	7'3		
5'6	4'8	5'2	4'8	6'0	5'3	4'8	5'2	4'9	4'4	5'8	5'0	6'0	5'5	6'2	5'9	5'2		
14'0	12'6	12'4	11'4	14'1	12'9	12'0	11'7	11'6	10'9	13'9	12'0	15'7	14'6	15'5	15'3	13'0		
1'8	2'4	2'6	2'4	2'0	2'2	1'6	1'7	1'6	1'5	1'9	1'7	2'0	2'7	3'1	2'6	2'0		
4'5	6'3	6'2	5'7	4'7	5'5	4'0	3'8	3'8	3'6	4'6	4'0	5'2	7'3	7'8	6'8	5'0		
...	...	...	12'22	180'48	192'70	59'25	...	44'10	...	70'04	173'39	43'78	131'74	...	175'52	594'12
...	6'16	0'15	3'41	15'30	25'02	...	...	1'64	...	0'08	1'72	8'37	21'36	..	29'73	60'27
...	...	...	...	...	...	...	...	...	...	...	...	8	3	.	11	15
...	...	...	...	...	...	...	...	...	...	...	..	269'43	29'92	...	299'35	337'54
...	...	...	...	...	...	...	...	...	...	...	...	3'94	0'58	..	4'52	4'62
...	...	...	...	...	...	...	...	...	...	...	...	0'14	...	...	0'14	0'14
...	...	...	...	...	...	...	...	...	...	...	...	0'09	0'05	...	0'14	0'14
8'94	...	...	...	...	58'94	...	...	17'00	...	...	17'00	...	...	...	...	93'35
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	0'33
...	...	...	...	...	..	..	...	...	...	...	...	...	..	..	...	0'04
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	0'16
16	36½	131	49	37	269½	5	87	34	..	55	181	125½	82	21	228½	783		
22	54	141½	23	59	299½	31½	57	32	3	87	210½	232	152	7	391	1,043½		
36½	27	31	77	11	182½	45½	22	11	...	15	93½	39	22	...	61	408½		
17'06	245'91	385'16	134'13	166'26	968'52	119'69	164'42	170'69	...	191'05	645'85	445'69	391'07	76'29	913'05	2'719'21		
10'44	33'71	44'78	82'14	33'63	224'70	11'14	52'19	10'33	0'82	64'31	138'79	111'75	91'89	...	203'64	592'60		
4'29	35'30	84'32	32'67	49'39	205'97	25'01	123'88	25'25	...	19'87	194'01	154'10	126'44	11'20	291'74	775'17		
3'45	22'03	46'79	15'88	27'15	115'30	8'60	24'72	3'44	...	4'87	41'63	55'46	42'83	10'16	108'45	309'95		
0'03	0'28	0'53	0'08	0'02	0'94	0'29	0'19	0'04	...	0'04	0'56	0'33	0'22	...	0'55	2'24		
...	9	31	10	7	57	4	17	...	...	53	74	39	39	...	78	282
...	99'64	96'27	34'96	7'23	238'10	20'28	50'40	...	...	186'94	257'62	308'68	197'82	...	506'50	1,434'89
...	0'07	0'01	...	...	0'08	0'01	0'01	...	...	0'04	0'06	...	0'01	...	0'01	0'16
0'07	0'10	0'06	...	...	0'23	...	0'05	0'04	0'08	...	0'17	0'17	...	...	0'17	0'61

Statistical Account of Work done and Expenditure incurred on Relief Works, from October 1899

Serial No.	Particulars.				Jubbulpore Civil Division.					
					Jubbulpore.	Seoni.	Mandla.	Saugor.	Damoh.	Totals and averages for
	VII.—VALUE OF WORK DONE AT NORMAL RATES.									
119	(a) Railways	...	...	Lakhs of Rs.	0 06	0 21	...	...	...
120	(b) Irrigation works	...	...	"	0'16	...	...	...	...
121	(c) Water-supply	...	...	"	...	0'24	...	...	...
122	(d) Road works	...	...	"	1'05	0 84	0'25	0'54	...	
123	(e) Village tanks	...	...	"	0 30	0 75	...	1'05	...	
124	(f) Other works—Miscellaneous	...	...	"	...	...	0'04	...	...
125	GRAND TOTAL				1'57	2'04	0'29	1'59	...	
	VIII.—RATIO OF FAMINE TO ORDINARY RATES OF WORK.									
	A—Actual									
126	(a) Works including only wages	...	...	Ratio.	1'31	1 22	0 88	1'40	...	
127	(b) Works including only Wages and items of work done by contract.	...	...	"	1'35	1'26	0'94	1'43	...	
128	(c) Works including Wages, Gratuitous and items of work done by contract.	...	...	"	1'38	1'31	0'94	1'52	...	
129	(d) Total expenditure including Works and all incidental charges.	...	...	"	1'90	1'73	1'14	2 30	...	
	B.—Reduced to uniform 10 seer-basis.									
130	(e) Works including only wages (reduced to a uniform 10 seer wage-basis) and items of work done by contract.	...	...	"	1'81	1'51	1'15	1'71	...	
131	(f) Works including wages, gratuitous (reduced to a uniform 10 seer market prices) and items of work done by contract.	...	...	"	1'84	1'56	1'15	1'81	...	
132	(g) Total expenditure including Works and all incidental charges	...	...	"	2'37	1'98	1'35	2'59	...	
	IX.—AVERAGE PRICE OF FOOD-GRAINS IN SEERS PER RUPEE.									
133	(a) Average of five years, 1890 to 1894	...	...	Seers.	15	17	18	13	...	
134	(b) During present famine	...	...	"	12	10½	8	11	...	
135	(c) Average wage-basis	...	...	"	13½	12	10½	12	...	
	X.—DEATH-RATE PER MILLE.									
136	(a) Total No of deaths recorded on the Public Works Department works.	No.			143	337	...	209	...	
137	(b) Average relief population, <i>vide</i> item 24	Thousands			10'8	11'1	...	11'7	...	
138	(c) Death-rate per thousand relief-workers on Public Works Department works only.	No.			13'3	30'2	...	18 0	...	
139	(d) District death-rate during present famine	"			37'7	31'5	24'3	40'1	30'5	
140	(e) Average of decennial period up to 1894	"			35'1	29 8	30'5	40 0	38'9	

October 1900, under the Public Works Department (arranged by Districts and Civil Divisions).—(Concl'd.

Nagpur Civil Division.						Nerbudda Civil Division.						Chhattisgarh Civil Division.						TOTALS AND AVERAGES FOR CENTRAL PRO- VINCIA	
Nagpur.	Wardha.	Chanda.	Bhandara.	Balaghat.	Totals and averages for Nagpur Divi- sion.	Hoshangabad.	Betul.	Nimar.	Narsinghpur.	Chhindwara.	Totals and averages for Nerbudda Division.	Raipur.	Bilaspur.	Sambalpur.	Totals and averages for Chhattisgarh Division.				
...	0'30	0'01	0'16	1'64	2'11	0'30	...	0'37	...	0'37	1'04	0'34	1'70	...	2'04	5'46			
...	...	...	...	...	...	...	...	...	...	...	...	2'38	0'30	...	2'68	2'84
0'88	0'06	...	...	...	0'94	...	...	0'17	...	...	0'17	...	...	...	...	1'35
1'52	3'26	5'79	4'46	2'88	17'91	1'96	5'19	1'64	0'04	4'40	13'23	9'74	5'83	0'43	16'00	49'82			
...	0'76	0'65	0'18	0'03	1'62	0'18	0'40	...	...	1'13	1'71	1'43	1'18	...	2'61	8'04	
0'07	0'10	0'06	...	...	0'23	...	0'05	0'04	0'08	...	0'17	0'17	...	...	0'17	0'61
2'47	4'48	6'51	4'80	4'55	22'81	2'44	5'64	2'22	0'12	5'90	16'32	14'06	9'01	0'43	23'50	68 12			
1'36	1'74	1'80	2'28	2'08	1'90	1'89	1'81	1'73	0'92	1'24	1'60	2'14	1'51	1'33	1'88	1'77			
1'57	1'87	1'89	2'35	2'17	2'00	2'22	1'82	1'83	1'10	1'28	1'68	2'39	1'60	1'56	2'07	1'89			
1'64	2'03	2'04	2'48	2'26	2'13	2'35	1'91	2'05	1'13	1'38	1'80	2'58	1'79	1'82	2'26	2'04			
2'50	2'93	2'86	2'97	2'67	2'82	3'69	2'65	3'55	3'72	1'76	2'61	3'58	2'61	2'86	3'20	2'83			
1'64	2'13	1'89	2'46	2'27	2'19	2'41	1'73	1'83	1'28	1'41	1'84	2'71	1'82	1'56	2'26	2'07			
1'72	2'30	2'03	2'58	2'36	2'32	2'54	1'82	2'04	1'31	1'50	1'96	2'91	2'03	1'82	2'45	2'21			
2'57	3'19	2'85	3'09	2'77	3'01	3'88	2'55	3'54	3'91	1'88	2'77	3'91	2'85	2'86	3'38	3'01			
15	15	18	16	16	16	14	16	14	14	15	15	18	19	18	18	16			
10	10½	9½	9½	9½	10	10	9	9½	10	9½	10	10½	10½	10	10	10			
10½	11½	10	10½	10½	11	11	9½	10	12	11	11	11½	11½	10	11	11			
226	1,052	2,508	556	542	4,884	721	400	1,011	4	978	3,114	1,111	1,477	217	2,805	11,492			
149	333	45'1	47'5	38'8	179'6	24'3	42'3	22'3	1'9	30'7	121'5	131'2	64'2	28	198'2	532'9			
15'2	31'6	55'6	11'8	13'9	27'2	29'7	9'5	45'0	2'0	32'0	25'6	8'5	23'1	77'8	14'2	21'6			
58'9	85'3	89'9	58'6	39'4	66'4	53'4	82'9	107'8	32'9	84'8	72'4	54'1	44'9	99'5	66'2	59'5			
30'8	35'7	31'8	29'8	29'3	31'5	36'3	34'7	37'2	40'9	31'5	36'1	30'8	27'7	29'1	29'2	33'3			

APPENDIX B TO THE FAMINE REPORT, PUBLIC WORKS
DEPARTMENT SECTION.

Abstract statement of work done by Famine labour, arranged by
Districts and Civil Divisions.

Abstract statement of work done by Famine

Sub-Division, and name of Sub-Division- al Officer.	Serial No.	Name and Index No. of Charge.	Name and class of work, and dates of commencement and closure of work.	Value of work done at normal Public Works Department rates.	Total expen- diture on Works,— wages, gra- tuitous and items of work done by con- tract.
1	2	3	4	5	6
JUBBULPORE. Mr. P. J. FITZPATRICK, Sub-Engineer.			JUBBULPORE CIVIL DIVISION.		
			JUBBULPORE DISTRICT.	Rs.	Rs.
			<i>I.—Railways.</i>		
	1	5 Sleemanabad ..	Metal-breaking for East Indian Railway ... From 25th July 1900. To 6th September 1900.	6,186	6,118
			Totals and Averages for I.—Railways ..	6,186	6,118
			<i>II.—Irrigation Works.</i>		
	2	1 Majholi ...	Constructing Darsani Tank ... From 18th December 1899. To 5th March 1900.	4,609	5,354
	3	2 Bohriban ...	Constructing Semrapet Tanks, Nos. I and II ... From 18th January 1900. To 13th July 1900.	5,812	6,835
	4	3 Panagarh ...	Constructing Balaha Tank at Panagarh ... From 15th January 1900. To 20th August 1900.	5,269	5,669
			Totals and Averages for II.—Irrigation Works ...	15,690	17,858
			<i>III.—Road Works.</i>		
			(i) New Roads.		
	5	1 Majholi ...	Constructing Road from Sihora <i>vid</i> Majholi to Katao as Class II. Length 19 miles. From 1st November 1899. To 28th July 1900.	24,373	34,419
	6	3 Panagarh ...	Constructing Panagarh-Singuldeep Road as Class II. Length 10 miles. From 18th December 1899. To 12th October 1900.	22,774	37,586
	7	4 Kundum ...	Constructing Kundum-Silondi Road as Class II. Length 11 miles. From 3rd January 1900. To 18th August 1900.	7,809	10,269
	8	5 Sleemanabad ...	Constructing Road from Sleemanabad Town to Sulaia crossing, and from crossing to Railway Station as Class II. Length 7 miles. From 22nd January 1900. To 6th September 1900.	4,550	7,623
			Totals and Averages for (i) New Roads ...	59,506	89,897

DIX B.

labour, arranged by Districts and Civil Divisions.

Total number of day-units relieved.	Number of day-units relieved per rupee of expenditure on works only.	Ratio of famine to ordinary rates.	Average wage-basis in seers per rupee.	Duration of work.	Probable amount required to complete at Public Works Department normal rates.	Remarks.
7	8	9	10	11	12	13
No.	No.	Ratio.	Seers.	Months.	Rs	
78,755	13	0'99	14	1½	.	Ballast approved and is being taken over by the East Indian Railway.
78,755	13	0'99	...	...	...
85,117	16	1'16	14	2½	...	This tank was excavated for irrigation purposes. Drainage area 1,593'6 acres. Waterspread 105'4 acres. Capacity 25,481,424 cubic feet.
114,446	17	1'18	14	5¾	..	These tanks were excavated for irrigation purposes.
100,747	18	1'08	14	7	...	This tank was excavated for irrigation purposes. Drainage area 526 acres. Waterspread 144'3 acres. Capacity 36,021,262 cubic feet.
300,310	17	1'14	...	...	...	The Commissioner remarks against Items 2, 3 and 4:—"Useful."
556,734	16	1'41	14	9	15,000	16 miles of road banked and moorumed throughout. The Commissioner remarks:—"Would have been very useful had it been carried through the Katao, as it would then have been a through line between the south of the Damoh District and the Railway. As now left it is of merely local value and is now (the Deputy Commissioner informs) practically impassable owing to collapses during the monsoon."
672,734	18	1'65	14	10	5,000	The earthwork has been completed and a 4½" coat of moorum given throughout. The road is practically complete with the exception of causeways. The Commissioner remarks:—"Very useful indeed. Connects a very productive tract with the Railway."
151,268	15	1'32	13	7½	12,000	6 miles banked and 5 miles of ghât road completed. The Commissioner remarks:—"Not of much use save for administrative purposes and only taken up in the lack of tank projects."
136,928	18	1'67	14	7½	2,000	Completed with the exception of causeways. The Commissioner remarks:—"Useful."
1,517,664	17	1'51	...	...	34,000	

Abstract statement of work done by Famine labour,

Sub-Division, and name of Sub-Division- al Officer.	Serial No.	Name and Index No. of Charge.	Name and class of work, and dates of commencement and closure of work.	Value of work done at normal Public Works Department rates.	Total expen- diture on Works,— wages, gra- tuitous and items of work done by con- tract.
1	2	3	4	5	6
JUBBULPORE. Mr. P. J. FitzPATRICK, Sub-Engineer.			JUBBULPORE CIVIL DIVISION.—(Contd.) JUBBULPORE DISTRICT.—(Concl'd.) III.—Road Works.—(Concl'd.) (ii) Roads raised in Class.	Rs.	Rs.
	9	2 Bohriban ...	Improving the Sihora-Salaia Road to Class II. Length 25 miles. From 6th November 1899. To 13th July 1900.	15,899	19,071
	10	4 Kundum ...	Raising the Jubbulpore-Kundum-Shahpura Road to Class II from the 20th mile. From 15th January 1900. To 18th August 1900.	5,977	8,859
	11	5 Sleemanabad ...	Improving Umaria-Dheemarkhera Road ... From 17th May 1900. To 25th July 1900.	5,726	12,047
	12	Do. ...	Improving Sulaia crossing to Umaria Road. Length 15 miles. From 22nd January 1900. To 6th September 1900.	8,312	13,794
			Totals and Averages for (ii) Roads raised in Class ...	35,914	53,771
			(iii) Reserve collection of Metal for Repairs and Renewals.		
	13	3 Panagarh ...	Metal collection on the Jubbulpore-Mirzapur Road, 7 to 10 miles From 1st August 1900. To 12th October 1900.	10,197	14,571
			Totals and Averages for (iii) Reserve collection of Metal for Repairs and Renewals.	10,197	14,571
			Totals and Averages for Road works—(i), (ii) and (iii) ...	1,05,617	1,58,239
			IV.—Village Tanks.		
	14	1 Majholi, 2 Bohriban and 5 Sleemanabad.	Improving 29 Village Tanks From 15th December 1899. To 31st July 1900.	29,683	34,690
			Totals and Averages for IV—Village Tanks ...	29,683	34,690
			GRAND TOTALS AND AVERAGES FOR THE JUBBULPORE DISTRICT.	1,57,176	2,16,905

DIX B.—(Contd.)

arranged by Districts and Civil Divisions.—(Contd.)

Total number of day-units relieved.	Number of day-units relieved per rupee of expenditure on works only.	Ratio of famine to ordinary rates.	Average wage-basis in seers per rupee.	Duration of work	Probable amount required to complete at Public Works Department normal rates	Remarks.
7	8	9	10	11	12	13
No.	No.	Ratio	Seers.	Months.	Rs.	
315,259	17	1'20	14	8½	5,000	Earthwork and 9" moorum soling completed for 11 miles, and construction of 3 miles to link up with Indian Midland Railway has also been completed. The Commissioner remarks :—" Useful."
130,506	15	1'48	13	7	...	General improvements and a 6" coat of moorum soling completed on a length of 14 miles. The Commissioner remarks :—"Useful."
210,315	17	2'10	14	2½	10,000	15 miles improved throughout; formation raised; and a coat of 4½" of moorum given. Causeways required to be constructed. The Commissioner remarks :—" A local road which will be of some use."
256,853	19	1'66	14	7½		
912,933	17	1 50	...	...	15,000	
198,245	14	1 43	14	2½	...	The collection of metal on miles 7 to 10 has been completed. The Commissioner remarks :—" Useful."
198,245	14	1'43	...	...	...
2,628,842	17	1'50	...	...	49,000	
578,302	17	1'17	14	7½	...	All tanks have been completed. The Commissioner remarks :—" All these tanks are useful; but some were taken up too hurriedly and it is doubtful whether their catchment area is sufficient."
578,302	17	1'17	...	...	...
3,586,209	16	1'38	13½	12	49,000	

Abstract statement of work done by Famine labour,

Sub-Division, and name of Sub-Divisional Officer.	Serial No.	Name and Index No. of Charge.	Name and class of work, and dates of commencement and closure of work.	Value of work done at normal Public Works Department rates	Total expenditure on Works,—wages, gratuitous and items of work done by contract.
1	2	3	4	5	6
SEONI. LALA CHANDI PRASAD, Supervisor.			JUBBULPORE CIVIL DIVISION.—(Contd.)		
			SEONI DISTRICT.		
			I.—Railways.	Rs.	Rs.
	1	3 Ugli and 5 Kanewara.	Constructing Seoni-Mandla Branch of Satpura Railway. Length 45 miles. From 1st April 1900 To 18th July 1900.	14 748	22,676
	2	4 Kahani (Mahta, Ghansor).	Constructing Satpura Railway main line, Gondia to Jubbulpore, 29 miles. From 6th April 1900. To 20th July 1900.	6,911	13,865
			Totals and Averages for I.—Railways	21,659	36,541
			II-A.—Water-supply.		
	3	6. Seoni (Babaria).	Improving Babaria Tank From 15th April 1900. To 14th October 1900.	23,702	26,512
			Totals and Averages for II-A.—Water-supply	23 702	26,512
			III.—Road Works.		
			(i) New Roads.		
	4	2 Khoont and 3 Ugli (Keolari).	Constructing Ugli-Chappara surface road. Length 35 miles From 1st January 1900. To 17th May 1900.	3 612	5,280
	5	2 Khoont and 5 Mylee (Kanewara)	Constructing Burghat-Kanewara surface road. Length 15 miles. From 24th January 1900. To 30th April 1900.	1,056	1,276
			Totals and Averages for (i) New Roads	4,668	6,556

DIX B.—(Contd.)

arranged by Districts and Civil Divisions.—(Contd.)

Total number of day-units relieved.	Number of day-units relieved per rupee of expenditure on works only.	Ratio of famine to ordinary rates.	Average wage-basis in seers per rupee.	Duration of work.	Probable amount required to complete at Public Works Department normal rates	Remarks.
7	8	9	10	11	12	13
No.	No.	Ratio.	Seers.	Months.	Rs.	
324,916	14	1'54	12½	5½	...	Earthwork for a length of 16 miles has been completed.
201,115	15	2 01	13	3½	...	Earthwork for a length of 3½ miles has been completed.
526,031	14	1 69	...	...	...
358,218	14	1'12	12	6	...	The bund and puddle-wall have been raised. This has increased the capacity of the tank by about 10 millions cubic feet. An additional waste-channel of 250' has been provided. The Commissioner remarks :—"Very useful indeed."
358,218	14	1'12	...	...	...
75,723	14	1 46	12½	4½	6,000	20 miles out of a total length of 35 miles have been completed; 15 miles in the middle through a ghât is left unfinished. The Commissioner remarks as follows :—"Should be called the Jeora-Ugli Road as Chappara is half-way only. Strips completed on either side of a very easy ghât, through which a practicable roadway could be made at no great cost. If the ghât were completed the road would be very useful."
17,218	13	1'21	12	3¼	...	The whole length of 15 miles has been completed as surface road. The Commissioner remarks :—"A useful cross-country road."
92,941	14	1'40	...	...	6,000	

Abstract statement of work done by Famine labour,

Sub-Division, and name of Sub-Divisional Officer.	Serial No.	Name and Index No. of Charge.	Name and class of work, and dates of commencement and closure of work.	Value of work done at normal Public Works Department rates.	Total expenditure on Works, wages, gratuitous and items of work done by contract.
1	2	3	4	5	6
SEONI. LALA CHANDI PRASAD, Supervisor.			JUBBULPORE CIVIL DIVISION.—(Contd.) SEONI DISTRICT.—(Concl'd.) III.—Road Works.—(Concl'd.) (ii) Roads raised in Class.	Rs.	Rs.
	6	1 Ari ...	Raising Seoni-Katangi Road to Class II. Length 24½ miles. From 21st October 1899. To 15th September 1900.	47,389	62,201
	7	4 Kahani (Mahta, Ghansor).	Raising Kahani-Ghansor Road to Class II. Length 10 miles. From 21st January 1900. To 6th April 1900.	4,207	4,748
	8	6 Seoni (Babaria)..	Raising 5 miles of the Seoni-Mandla Road from Class II to I From 20th June 1900. To 8th October 1900.	4,888	5,747
			Totals and Averages for (ii) Roads raised in Class ...	56,484	72,696
			(iii) Reserve Collection of Metal for Repairs and Renewals.		
	9	2 Khoont ...	Collection of reserve metal and moorum on the Seoni-Balaghat Road. Length 27 miles. From 20th November 1899. To 17th May 1900.	21,625	31,928
	10	Do. ...	Improvement to Circular Road, Seoni Town. Length 4 miles. From 6th August 1900. To 5th October 1900.	1,080	1,318
			Totals and Averages for (iii) Reserve Collection of Metal, &c.	22,705	33,246
			Totals and Averages for Road Works (i), (ii) and (iii) ...	83,857	1,12,498
			IV.—Village Tanks.		
	11	1 Ari, 2 Khoont, 3 Ugli (Keolari), 4 Kahani and 5 Mylee (Kaniwarā).	Improving 37 Village Tanks ...	75,045	92,784
			Totals and Averages for IV—Village Tanks ...	75,045	92,784
			GRAND TOTALS AND AVERAGES FOR THE SEONI DISTRICT...	2,04,263	2,68,335

DIX-B.—(Contd.)

arranged by Districts and Civil Divisions.—(Contd.)

Total number of day-units relieved.	Number of day-units relieved per rupee of expenditure on works only.	Ratio of famine to ordinary rates.	Average wage-basis in seers per rupee.	Duration of work.	Probable amount required to complete at Public Works Department normal rates	Remarks.
7	8	9	10	11	12	13
No.	No.	Ratio.	Seers.	Months.	Rs.	
774,508	12	1'31	12	10½	3 000	23 miles have been completed. The Commissioner remarks:—"Very useful."
27,488	16	1'13	13	2½	300	Moorum collection for a 9" coat for 9 miles has been completed. The Commissioner remarks:—"Will be useful when the Railway is opened, as there is to be a station at Ghansor."
70 550	12	1'18	12	3½	...	The Commissioner remarks:—"Useful."
922,546	13	1'29	...	...	3,300	
450,944	14	1'48	12	6	...	Completed. The Commissioner remarks:—"Useful."
16,000	12	1'22	12	2	...	The work has been completed. The Commissioner remarks:—"For pleasure rather than use."
466,944	14	1'46	...	...	...
1,482 431	13	1'34	...	...	9,300	
1,278,772	14	1'24	...	...	...	All tanks have been completed, except that of Gorakpur, which is thought unimportant. The Commissioner remarks:—"All these tanks are useful and are much more appreciated by the people than our roads. I wish that more tank work had been done by the Ugli Charge and less road work."
1,278,772	14	1'24	...	...	...
3,645,452	14	1'31	12	12	9 300	

Abstract statement of work done by Famine labour,

Sub-Division, and name of Sub-Divisional Officer.	Serial No	Name and Index No. of Charge.	Name and class of work, and dates of commencement and closure of work.	Value of work done at normal Public Works Department rates.	Total expenditure on Works,—wages, gratuitous and items of work done by contract.
1	2	3	4	5	6
DINDORI. Munshi Mahomed Ismail, Sub-Overseer.			JUBBULPORE CIVIL DIVISION.—(Contd.) MANDLA DISTRICT. III.—Road Works. (i) New Roads.	Rs.	Rs.
	1	1 Amera	Constructing Road from Shahpura to Shahpur as Class II. Length 25 miles. From 1st April 1900. To 30th September 1900.	19,606	18,218
			Totals and Averages for (i) New Roads	19,606	18,218
			(ii) Roads raised in Class.		
	2	1 Amera	Improving Shahpura-Kundum Road to Class II. Length 18 miles. From 15th April 1900. To 30th September 1900.	5,982	5,818
			Totals and Averages for (ii) Roads raised in Class	5,982	5,818
			Totals and Averages for Road Works (i) and (ii)	25,588	24,036
			V.—Other Works—Miscellaneous.		
	3	1 Amera	Repairing Dindori-Birsinghpur Road From 24th June 1900. To 30th September 1900.	3,804	3,540
			Totals and Averages for V.—Other Works—Miscellaneous.	3,804	3,540
SAUGOR. Conductor W. J. Singleton, Sub-Engineer, up to 1st April 1900; Mr. G. Wright-Neville, Assistant Engineer, from 2nd April 1900.			GRAND TOTALS AND AVERAGES FOR THE MANDLA DISTRICT.	29,392	27,576
			SAUGOR DISTRICT. III.—Road Works. (ii) Roads raised in Class.		
	1	7 Dhana	Raising Saugor-Rehli Road to Class II. Length 19 miles ... From 13th February 1900. To 12th August 1900.	7,492	14,223
			Carried over	7,492	14,223

DIX B.—(Contd.)

arranged by Districts and Civil Divisions.—(Contd.)

Total number of day-units relieved.	Number of day-units relieved per rupee of expenditure on works only.	Ratio of famine to ordinary rates.	Average wage-basis in seers per rupee.	Duration of work.	Probable amount required to complete at Public Works Department normal rates	Remarks.
7	8	9	10	11	12	13
No. 188,909	No. 10	Ratio. 0.93	Seers. 10½	Months 6	Rs. 10,000	A length of 18 miles has been newly constructed and 7 miles which were partially constructed during the famine of 1897 have been finished. The road has a 2-feet bank throughout the black cotton sections and has been given a 6" coat of moorum.
188,909	10	0.93	...	...	10,000	The Commissioner remarks:—"The road work effected is useful."
64,222	11	0.97	10½	5½	...	This road has been thoroughly repaired and a 6" coat of moorum spread throughout; side and catch-water drains have been excavated and the cross drainage improved.
64,222	11	0.97	...	...	...	The Commissioner remarks:—"The road work effected is useful."
253,131	11	0.94	...	...	10,000	
34,950	10	0.93	10½	3¼	...	The road has been repaired for a length of 30 miles.
34,950	10	0.93	...	...	...	The Commissioner remarks:—"The road work effected is useful, but the road is impassable for 10 miles of its length in the Rewa Territory, and until this length is put into order, the expenditure will bear but little fruit."
288,081	11	0.94	10½	6	10,000	
221,755	16	1.90	12½	6	29,351	Earthwork and moorum consolidation have been completed in miles 7 to 10. About 39,000 cft. of rubble has been collected in miles 7 and 9. The Commissioner remarks:—"There is no work more needed in Saugor than the construction of a good road between Saugor and Rehli."
221,755	...	...	...	...	29,351	

Abstract statement of work done by Famine labour

Sub-Division, and name of Sub-Divisional Officer.	Serial No.	Name and Index No. of Charge.	Name and class of work, and dates of commencement and closure of work.	Value of work done at normal Public Works Department rates.	Total expenditure on Works,—wages, gratuitous and items of work done by contract.
1	2	3	4	5	6
SAUGOR. Conductor W. J. SINGLETON, Sub-Engineer, up to 1st April 1900. Mr. G. WATOUR-NEVILLE, Assistant Engineer, from 2nd April 1900.			JUBBULPORE CIVIL DIVISION.—(Contd.) SAUGOR DISTRICT.—(Contd.) III.—Road Works.—(Contd.) (ii) Roads raised in Class.—(Concl'd.)	Rs.	Rs.
			Brought forward ...	7,492	14,223
	2	8 Banda ...	Raising Saugor-Cawnpur Road to Class I. Length 48½ miles From 9th April 1900. To 6th September 1900.	12,362	21,695
	3	9 Schore ...	Raising Saugor-Rahatgarh Road to Class I. Length 28 miles From 11th May 1900. To 6th October 1900.	8,055	20,846
	4	10 Barodia ...	Raising Saugor-Jhansi Road to Class II. Length 42 miles .. From 14th April 1900. To 6th September 1900.	4,143	5,086
	5	11 Bassahri ...	Raising Khimlasa-Etawah Road to Class II. Length 12 miles. From 9th July 1900. To 27th October 1900.	4,514	11,844
			Totals and Averages for (ii) Roads raised in Class ...	36,566	73,694
			(iii) Reserve Collection of Metal for Repairs and Renewals.		
	6	2 Koondari ...	Metal collection on Saugor-Jhansi Road. Length 42 miles... From 1st November 1899. To 9th May 1900.	17,634	23,703
			Totals and Averages for (iii) Reserve Collection of Metal for Repairs and Renewals.	17,634	23,703
			Totals and Averages for Road Works (ii) and (iii) ...	54,200	97,397

DIX B.—(Contd.)

arranged by Districts and Civil Divisions.—(Contd.)

Total number of day-units relieved.	Number of day-units relieved per rupee of expenditure on works only.	Ratio of famine to ordinary rates.	Average wage-basis in seers per rupee.	Duration of work.	Probable amount required to complete at Public Works Department normal rates.	Remarks.
7	8	9	10	11	12	13
No.	No.	Ratio.	Seers.	Months.	Rs.	
221,755	...	...	...	...	29,351	
296,982	14	1'75	11½	5	18,873	Earthwork, moorum and metal collection and consolidation have been done between miles 19 and 24. Miles 21 and 22 are metalled and miles 23 and 24 moorumed.
300,354	14	2'58	12½	5	31,425	The Commissioner remarks:—"There is not sufficient traffic by this road to justify carrying the metalling further." The first 6 miles (4 to 10) were repaired. Metal has been collected and consolidated in miles 11 to 15 and moorum in miles 11 to 17.
75,282	15	1'22	11½	4	32,625	The Commissioner remarks:—"A useful road which might be eventually metalled up to Rahatgarh. But not till the Saugor-Rehli Road has been completed."
182,630	15	2'62	12	3½	19,413	Miles 25 to 33 were undertaken by famine labour. 3,088 cft. of metal and 284,286 cft. of moorum have been collected at roadside and at quarries. Moorum consolidated between miles 25 to 29. The Commissioner remarks:—"There is not sufficient traffic along this road to justify its maintenance as a metalled highway."
1,077,003	15	2'02	...	...	1,31,687	118,000 cft. of moorum has been collected, of this 98,700 cft. has been consolidated in miles 1 to 9 and 11. 96,500 cft. of metal has been collected in miles 1 to 8 and 11. The Commissioner remarks:—"The road will carry very little traffic."
285,877	12	1'34	12½	6½	...	Sufficient metal has been collected in miles 4 to 10 for a 9" coat.
285,877	12	1'34	...	...	...
1,362,880	14	1'80	...	...	1,31,687	

Abstract statement of work done by Famine labour,

Sub-Division, and name of Sub-Divisional Officer.	Serial No.	Name and Index No. of Charge.	Name and class of work, and dates of commencement and closure of work.	Value of work done at normal Public Works Department rates.	Total expenditure on Works,—wages, gratuitous and items of work done by contract.
1	2	3	4	5	6
SAUGOR. CONDUCTOR W. J. SINGLETON, Sub-Engineer, up to 1st April 1900. MR. G. WRIGHT-NEVILLE, Assistant Engineer, from and April 1900.			JUBBULPORE CIVIL DIVISION.—(Concl'd.) SAUGOR DISTRICT.—(Concl'd.) IV.—Village Tanks.	Rs.	Rs.
	7	1 Dhangar, 3 Khimlasa, 4 Chandrapur, 5 Binaika, 6 Rajwas and 10 Barodia.	Constructing and improving 7 Village Tanks ... From 27th October 1899. To 6th September 1900.	1,04,946	1,44,239
			Totals and Averages for IV—Village Tanks ...	1,04,946	1,44,239
			GRAND TOTALS AND AVERAGES FOR THE SAUGOR DISTRICT.	1,59,146	2,41,636
			NAGPUR CIVIL DIVISION. NAGPUR DISTRICT. II-A.—Water-supply.		
	1	4 Ambajheri ...	Deepening Ambajheri Tank ... From 18th February 1900. To 6th August 1900.	67,856	49,426
	2	9 Putara (Telinkheri).	Deepening Telinkheri Tank .. From 9th May 1900. To 25th June 1900.	7,217	7,348
	3	8 Jumma Talao ...	Deepening and improving Jumma Talao .. From 17th April 1900. To 3rd August 1900.	12,801	13,234
			Totals and Averages for II-A.—Water-supply ...	87,874	70,008
			III.—Road Works. (i) New Roads.		
NAGPUR. MR. F. MEEHAN, Honorary Assistant Engineer.	4	4 Ambajheri ...	Constructing 2½ miles of Nagpur-Bisnoor Road as Class II ... From 29th October 1899. To 17th February 1900.	5,513	7,232
			Carried over ...	5,513	7,232

DIX B.—(Contd.)

arranged by Districts and Civil Divisions.—(Contd.)

Total number of day-units relieved.	Number of day-units relieved per rupee of expenditure on works only.	Ratio of famine to ordinary rates.	Average wage-basis in seers per rupee.	Duration of work.	Probable amount required to complete at Public Works Department normal rates.	Remarks.
7	8	9	10	11	12	13
No.	No.	Ratio.	Seers.	Months.	Rs.	
2,239,950	16	1'37	11½	10¼	...	The Commissioner remarks:—"These tanks are all useful."
2,239,950	16	1'37	...	...	...
3,602,830	15	1'52	12	12	1,31,687	
656,040	13	0'73	9	5½	...	3,829,597 cft. of earth and hard and soft moorum were excavated below high water-level, of which 2,500,000 cft. were used in widening the dam and the balance thrown up as a spoil bank on the south side of the tank. The Deputy Commissioner remarks:—"Useful, complete."
145,089	20	1'02	9	1½	...	780,391 cft. of earth were excavated from the bed of the tank. Part of this was used in widening the dam, &c., and part has been kept for use as puddle should the Ambajheri dam be raised.
155,910	12	1'03	9	3½	...	1,233,173 cft. were excavated from the bed of this tank and 26,000 cft. of moorum collected for the road on the bund across the centre of tank. The earth excavated was used for raising and widening this bund, also for raising the island, near the north-east angle and filling up objectionable insanitary depressions between the west side of the tank and the Railway line.
957,039	14	0'80	...	...	...
73,412	10	1'31	11	3¾	2,500	Embankment and cutting with culverts have been completed for 2¼ miles. Moorum soling has been put down for the 1st half mile, and the rest of the road being on hard moorum, no more is required. A 9" coat of metal has been collected for the 1st half mile and 4½" for the rest of the road. This might be continued as a Railway Feeder to the village of Wadi, i. e., half a mile further on. The Deputy Commissioner, Nagpur, remarks:—"I do not think this road is of any particular use as far as it goes."
73,412	...	...	...	...	2,500	

Abstract statement of work done by Famine labour,

Sub-Division, and name of Sub-Divisional Officer.	Serial No.	Name and Index No. of Charge.	Name and class of work, and dates of commencement and closure of work.	Value of work done at normal Public Works Department rates.	Total expenditure on Works.—wages, gratuitous and items of work done by contract.
I	2	3	4	5	6
<p>NAGPUR. Mr. F. MEEHAN, Honorary Assistant Engineer.</p> <p>UMRER. BABOO K. PURSOTHAN RAZU, Temporary Supervisor, up to April 1900. BABOO C. R. DAMODAR, Moodliar, Sub-Overseer, from April 1900.</p> <p>NAGPUR. Mr. F. MEEHAN, Honorary Assistant Engineer.</p> <p>UMRER. BABOO K. PURSOTHAN RAZU, Temporary Supervisor, up to April 1900. BABOO C. R. DAMODAR, Moodliar, Sub-Overseer, from April 1900.</p>			<p>NAGPUR CIVIL DIVISION.—(Contd.)</p> <p>NAGPUR DISTRICT.—(Contd.)</p> <p>III.—Road Works.</p> <p>(i) New Roads.</p> <p>Brought forward ...</p>	Rs.	Rs.
	5	7 Waikora	Constructing Patansaongi-Khapa Road as Class II. Length 6½ miles. From 6th April 1900. To 22nd September 1900.	5,513	7,232
	6	3 Bhewapur	Constructing Bhewapur-Powni Road as Class II. Length 7 miles. From 31st October 1899. To 11th August 1900.	12,509	19,516
			Totals and Averages for (i) New Roads ...	24,539	35,615
			(ii) Roads raised in Class.		
	7	6 Metpanjra	Raising Nagpur-Kalmeshwar-Kotal Road to Class I. Miles 18 to 36. From 5th April 1900. To 29th June 1900.	2,215	3,650
	8	3 Bhiwapur, 5 Thana,	Metal collection for raising to Class I Umrer-Bhiwapur-Mul Road. Miles 30 to 48. From 31st October 1899. To 11th August 1900.	80,270	2,10,067
			Totals and Averages for (ii) Roads raised in Class ...	82,485	2,13,717

DIX B.—(Contd.)

arranged by Districts and Civil Divisions.—(Contd.)

Total number of dry-units relieved.	Number of day units relieved per rupee of expenditure on works only.	Ratio of famine to ordinary rates.	Average wage-basis in seers per rupee.	Duration of work.	Probable amount required to complete at Public Works Department normal rates.	Remarks.
7	8	9	10	11	12	13
No.	No.	Ratio.	Seers.	Months.	Rs.	
73,412	...	...	...	...	2,500	The earthwork is practically completed, side slopes of cuttings in 6th mile only remaining.
124,533	14	1'36	11	5½	8,335	76,575 cft. of moorum and sand have been collected. Of this 59,748 cft. have been spread in the first 3 miles; 10,827 cft. moorum and 6,000 cft. sand being stacked at quarry and road-side. 31,633 cft. of metal has been broken and 13,162 cft. spread and consolidated in ¾ of 1st mile from Patansaongi to the Chhindwara Road. The Deputy Commissioner remarks :—"Useful; should be completed."
242,036	12	1'56	10½	9½	9,603	This road connects the town of Powni on the Wainganga river with the Nagpur-Umrer-Mul Road. Length 7 miles. The whole of the embankment and cuttings except the last 4½ miles into Powni have been completed. 98,000 cft of moorum have been collected at quarries, sufficient for 2¼ miles. Of this 23,760 cft. have been spread on half of the 2nd mile. Three dry stone culverts have been built and 2 metalled dips completed with drop-walls downstream. The Deputy Commissioner remarks :—"Useful; should be completed."
439,981	12	1'45	...	...	20,438	
49,342	14	1'65	11	3	14,785	66,944 cft. of metal have been broken at Metprajra quarry between the 27th and 29th mile. This, with the balance from the 1897 famine, will suffice for mile 26 and miles 28 to 33. The Deputy Commissioner remarks :—"Useful; should be completed."
2,551,587	12	2'62	10½	9½	1,366	1,288,000 cft of metal have been collected at road-side and 300,000 at quarries, 77,000 cft. of moorum at roadside and 65,000 cft. at quarry. A 4½" coat has been spread and consolidated in miles 30 to 32, 34 to 35 and 37 to 48. The Deputy Commissioner remarks :—"Useful; should be completed."
2,600,929	12	2'59	...	...	16,151	

Abstract statement of work done by Famine labour,

Sub-Division, and name of Sub-Divisional Officer.	Serial No.	Name and Index No. of Charge.	Name and class of work, and dates of commencement and closure of work.	Value of work done at normal Public Works Department rates.	Total expenditure on Works,—wages, gratuitous and items of work done by contract.
1	2	3	4	5	6
NAGPUR. Mr. F. MEZHAN, Honorary Assistant Engineer. UMRER. BABOO K. PURUSHOTAM RAZU, Temporary Supervisor. UMRER. BABOO C. R. DANODAR, MOODLIAR, Sub-Overseer.			NAGPUR CIVIL DIVISION.—(Contd.) NAGPUR DISTRICT.—(Contd.) III.—Road Works.—(Contd.) (iii) Reserve collection of Metal for Repairs and Renewals.	Rs.	Rs.
	9	1 Tekadi	... Collection of metal and moorum for repairs and renewals on Great Northern Road. From 3 to 48½ miles. From 18th October 1899. To 31st March 1900.	21,668	31,764
	10	11 Borgaon	... Collection of metal for repairs and renewals to some of the Station and Kalmeshwar roads in Nagpur Sub-Division, (metal-breaking at Borgaon quarry). From 3rd August 1900. To 15th September 1900.	2,111	3,104
	11	2 Mahoda	.. Metal collection on Great Eastern Road, Nagpur-Mahoda Section. From 6th November 1899. To 7th April 1900.	21,167	38,114
	12	10 Panchgaon	... Collection of reserve coat of metal on Nagpur-Umrer Road, Class I. Length 25 miles. From 24th June 1900. To 10th July 1900.	483	1,217
Totals and Averages for (iii) Reserve collection of Metal for Repairs and Renewals.				45,429	74,199
Totals and Averages for Road Works (i), (ii) and (iii) ...				1,52,453	3,23,531

DIX B.—(Contd.)

arranged by Districts and Civil Divisions.—(Contd.)

Total number of day-units relieved.	Number of day-units relieved per rupee of expenditure on works only.	Ratio of famine to ordinary rates.	Average wage-basis in seers per rupee.	Duration of work.	Probable amount required to complete at Public Works Department normal rates.	Remarks.
7	8	9	10	11	12	13
No.	No.	Ratio.	Seers.	Months.	Rs.	
261,714	8	1'47	10	5½	...	315,906 cft. of metal has been broken for renewal of miles 13 to 19 and 31 to 41 and 100,000 cft. of rubble collected at quarries. The Deputy Commissioner remarks:—"Much wanted; should be completed."
33,322	11	1'47	10	1½	...	55,375 cft. of metal have been broken at quarry.
373,450	10	1'80	11	5	...	215,000 cft. of metal have been broken and collected at roadside and 157,000 cft. at quarries, and 54,643 cft. of rubble have been collected at roadside and 132,000 cft. at quarry. The Deputy Commissioner remarks:—"Useful."
17,086	14	2'52	10	3	...	4,000 cft. of metal have been broken from rubble collected in 1897 and 18,000 cft. of new rubble have been collected as well as 6,000 cft. of moorum. The Deputy Commissioner remarks:—"Useful."
685,572	9	1'63	...	...	...
3,726,483	12	2'12	...	...	36,589	

Abstract statement of work done by Famine labour,

Sub-Division, and name of Sub Division- al Officer.	Serial No.	Name and Index No. of Charge.	Name and class of work, and dates of commencement and closure of work.	Value of work done at normal Public Works Department rates.	Total expen- diture on Works,— wages, gra- tuitous and items of work done by con- tract.
1	2	3	4	5	6
UNRER. BADOO C. R. DANODAR, MOODLIAR, Sub-Overseer.			NAGPUR CIVIL DIVISION.—(Contd.) NAGPUR DISTRICT.—(Concl'd.) V.—Other Works—Miscellaneous.	Rs.	Rs.
	13	10 Panchgaon ...	Special repairs to Nagpur-Umrer Road, rubble soling ... From 11th July 1900. To 29th September 1900.	5,463	12,080
	14	3 Bhiwapur and 5 Thana.	Constructing wells on Umrer-Mul Road ...	1,154	1,154
			Totals and Averages for V—Other Works—Miscellaneous ...	6,617	13,234
			GRAND TOTALS AND AVERAGES FOR THE NAGPUR DISTRICT ...	2,46,944	4,06,773
			WARDHA DISTRICT. I.—Railways.		
	1	1 Sailu, 2 Nairee, 4 Jam and 8 Injhopur.	Ballast collection for Great Indian Peninsula Railway at Sailu, Nairee, Hinganghat and Injhopur. From 21st October 1899. To 18th October 1900.	20,321	68,322
	2	7 Pulgaon ...	Ballast collection for Great Indian Peninsula Railway at Pulgaon. From 18th May 1900. To 17th July 1900.	9,840	19,309
			Totals and Averages for I—Railways ...	30,161	87,631
WARDHA. BADOO J. N. MITRA, Supervisor. BADOO NARAIN DASS, Temporary Upper Subordinate, from 18th February to 23rd August 1900.					
HINGANGHAT. Mr. B. SHAW, Temporary Upper Subordinate, up to 7th February 1900 in charge of Jam and Nairee Camps; BADOO J. N. MITRA, Supervisor, from 8th February 1900.					

DIX B.—(Contd.)

arranged by Districts and Civil Divisions.—(Contd.)

Total number of day-units relieved.	Number of day-units relieved per rupee of expenditure on works only.	Ratio of famine to ordinary rates.	Average, age-basis in seers per rupee.	Duration of work.	Probable amount required to complete at Public Works Department normal rates.	Remarks.
7	8	9	10	11	12	13
No.	No.	Ratio.	Seers.	Months.	Rs.	
169,710	14	2'21	10	2½	...	Soling 10' wide and of an average thickness of 6" was given to miles 13, 12 and ½ of 8th. This was covered with about 1" of metal and 1" of hard moorum thoroughly consolidated. Miles 14 to 18 were also provided with soling and repaired where necessary, the whole of this section of the road having been badly broken up from heavy traffic at the beginning of the rains in July. A breach by the great flood of August in the south approach bank of the Karamana Bridge at the end of the 10th mile was also repaired.
...	...	...	...	...	841	The Deputy Commissioner remarks :—" Useful. "
169,710	13	2	...	...	841	Four wells were provided for. Of these two have been practically completed, only the fixing of the iron work for the pullies remaining. The third has been completed with the exception of parapet and platform. The fourth has not yet been commenced.
4,853,231	12	1'64	10½	12	37,430	The Commissioner remarks :—" Useful; should be completed."
848,010	12	3'36	11	12	...	518,161 cft. ballast collected for the Great Indian Peninsula Railway at four different places; 63,231 cft. rubble and 20,085 cft. metal still lying at quarries.
222,618	12	1'96	10¾	2	...	
1,070,628	12	2'91	...	...	...

Abstract statement of work done by Famine labour,

Sub-Division, and name of Sub-Divisional Officer.	Serial No.	Name and Index No. of Charge.	Name and class of work, and dates of commencement and closure of work.	Value of work done at normal Public Works Department rates.	Total expen- diture on Works,— wages, gra- tuitous and items of work done by con- tract.
0	2	3	4	5	6
WARDHA. BABOO J. N. MITRA, Supervisor.			NAGPUR CIVIL DIVISION.—(Contd.)		
			WARDHA DISTRICT.—(Contd.) ...		
			II-A.—Water-supply.	Rs.	Rs.
	3	4 Jam	... Improving Road leading to Hinganghat Water-works ... From 16th August 1900. To 18th October 1900.	3,812	8,110.
	4	9 Kutki	... Improvements to Head-works of the Hinganghat Water-works. From 13th June 1900. To 29th July 1900.	1,894	2,156.
			Totals and Averages for II-A—Water-supply ...	5,706	10,266
			III.—Road Works.		
			(i) New Roads.		
	5	1 Sailu	... Constructing Sailu-Pownar Railway Station and Sailu-Pownar Village Roads as Class II. Length 9½ miles. From 21st October 1899. To 15th October 1900.	52,910	1,16,425
	6	2 Nairee	... Constructing Road from Allipur to Sonagaon Railway Station as Class II. Length 6 miles. From 30th May 1900. To 11th August 1900.	8,093	12,528
	7	6 Allikeli	... Constructing Wardha-Anjee Road as Class II. Length 9 miles. From 17th December 1899. To 27th July 1900.	29,144	50,235
	8	9 Kutki	... Constructing Hinganghat-Pohona Road as Class II. Length 16 miles. From 19th March 1900. To 29th July 1900.	22,327	38,410
			Totals and Averages for (i) New Roads ...	1,12,474	2,17,598

DIX B.—(Contd.)

arranged by Districts and Civil Divisions.—(Contd.)

Total number of days-units relieved.	Number of days-units relieved per rupee of expenditure on works only.	Ratio of famine to ordinary rates.	Average wage-basis in seers per rupee.	Duration of work	Probable amount required to complete at Public Works Department normal rates.	Remarks.
7	8	9	10	11	12	13
No.	No.	Ratio.	Seers.	Months.	Rs.	
99,395	12'2	2'13	10¾	2	...	The road from the service reservoir to the pumping-station was badly damaged by the exceptional flood of August 1900. The whole length has been practically reconstructed and the engine-house and pumping-station rivetted with dry stone.
15,790	7'3	1'14	10½	1½	...	Considerable assistance was obtained from famine labour in the excavation for the filter beds, for the round part of the new infiltration well and for the pipe channel connecting this with the pumping well. Assistance was also taken in carrying a large number of boulders to protect the infiltration well from scour.
115,185	11	2'80	...	...	...
1,379,554	12	2'2	11	12	6,446	Earthwork and moorum soling have been completed throughout. Approaches of nallah crossings have been properly graded, dry stone walls provided on downstream sides, and dips metalled. Mile and boundary stones have been provided. Metal has been collected for a 9" coat at roadside. The Deputy Commissioner remarks:—"The work is of permanent utility and is an important Feeder road, and an artery of traffic in the district. It should be completed."
172,886	14	1'55	10¾	2½	2,300	Earthwork and moorum soling have been completed; approaches to nalla crossings graded and dry stone walls provided on downstream sides. The Deputy Commissioner remarks:—"This road is next in order of importance and may be completed if funds permit."
686,266	14	1'72	11	7¼	2,352	Earthwork and moorum soling have been completed; mile and boundary stones provided; approaches to nallahs graded. (For Deputy Commissioner's remarks see Item 5.)
522,340	14	1'72	10½	4¼	14,500	12 miles of earthwork have been completed and moorum has been consolidated in 10 miles. Nallah crossings in first 12 miles have had their approaches graded. (For Deputy Commissioner's remarks see Item 5.)
2,761,046	13	1'93	...	...	25,598	

Abstract statement of work done by Famine labour,

Sub-Division, and name of Sub-Divisional Officer.	Serial No	Name and Index No. of Charge.	Name and class of work, and dates of commencement and closure of work.	Value of work done at normal Public Works Department rates.	Total expenditure on Works,—wages, gratuitous and items of work done by contract.
1	2	3	4	5	6
<p>WARDHA.</p> <p>BABOO J. N. MITRA, Supervisor.</p> <p>HINGANGHAT.</p> <p>MR. B. SHAW, Temporary Upper Subordinate, up to 7th February 1900.</p> <p>WARDHA.</p> <p>BABOO J. N. MITRA, Supervisor, from 8th February 1900.</p> <p>WARDHA.</p> <p>BABOO J. N. MITRA, Supervisor, up to 17th February 1900.</p> <p>ARVI.</p> <p>BABOO NARAYEN DASS, Temporary Upper Subordinate, from 18th February 1900.</p> <p>HINGANGHAT.</p> <p>MR. B. SHAW, Temporary Upper Subordinate, up to 7th February 1900.</p> <p>WARDHA.</p> <p>BABOO J. N. MITRA, Supervisor, from 8th February 1900.</p>			<p>NAGPUR CIVIL DIVISION.—(Contd.)</p> <p>WARDHA DISTRICT.—(Contd.)</p> <p>III.—Road Works.</p> <p>(ii) Roads raised in Class.</p>	Rs.	Rs.
	9	1 Sailu and 6 Alikeli.	Raising Sailu-Alikeli Road to Class I. Length $1\frac{3}{4}$ miles ... From 15th April 1900. To 13th October 1900.	22,629	47,767
	10	2 Nairee ...	Raising road from Pulgaon <i>via</i> Nachangaon and Deoli to Hinganghat to Class I. Length 10 miles. From 5th November 1899. To 7th April 1900.	13,004	35,114
	11	3 Thalaigaon ...	Metal collection on Arvi-Ashti Road for raising to Class I. Length 14 miles. From 29th October 1899. To 20th July 1900.	42,486	1,05,158
	12	4 Jam ...	Raising Hinganghat-Samadrapur Road to Class I. Length 14 miles. From 1st November 1899. To 18th October 1900,	54,846	93,301
			Carried over ...	1,32,965	2,81,340

DIX B.—(Contd.)

arranged by Districts and Civil Divisions.—(Contd.)

Total number of day-units relieved.	Number of day-units relieved per rupee of expenditure on works only.	Ratio of famine to ordinary rates.	Average wage-basis in seers per rupee.	Duration of work	Probable amount required to complete at Public Works Department normal rates.	Remarks.
7	8	9	10	11	12	13
No.	No.	Ratio.	Seers.	Months.	Rs.	
632,830	13	2'11	11	6	3 600	Earthwork has been completed; moorum soling consolidated; mile and boundary stones provided; nallah approaches graded; dips metalled but without side walls. The Deputy Commissioner remarks:—"This road is of no importance and was undertaken simply to afford work to the relief-workers at Salla and Alikeli, no other work being available in the vicinity. No further expenditure on this road is justified."
445,428	13	2'70	10¾	5	8,620	Metal has been collected at quarries and brought to roadside at depôts, sufficient in quantity for a 9" coat for 10 miles. For 3 miles the metal has been distributed and stacked at roadside. The high ratio of famine compared with normal rate is due to carriage of metal over long leads. The Deputy Commissioner remarks:—"The work is of permanent utility and is an important feeder road and artery of traffic in the district. It should be completed."
1,320,395	13	2 47	10½	8¾	9,487	Earthwork has been completed in the last 8 miles; 9" moorum soling collected for the whole length of 16 miles; nallah crossings and approaches partially graded; mile-stones provided; and metal collected for two 4½" coats. The ratio of famine to normal rate is high owing to the metal and moorum being carried over long leads by head-loads. (For the Deputy Commissioner's remarks see item 10.)
1,239,195	13	1'70	10¾	11½	12,000	Formation level has been re-sectioned from Hinganghat to Jam, 10 miles. A new road has been constructed from Jam to Samadrapur, 4 miles. Earthwork has been completed; 9" moorum soling collected and consolidated. Nallah approaches have been graded and dips metalled. Metal has been collected at roadside for the first 11 miles; at quarry for the last three miles and at 4 depôts as reserve. (For the Deputy Commissioner's remarks see item 10)
3,637,848	...	...	...	...	33,707	

Abstract statement of work done by Famine labour,

Sub-Division and name of Sub-Divisional Officer.	Serial No.	Name and Index No. of Charge.	Name and class of work, and dates of commencement and closure of work.	Value of work done at normal Public Works Department rates.	Total expenditure on Works,—wages, gratuitous, and items of work done by contract.
1	2	3	4	5	6
<p>WARDHA.</p> <p>BABOO J. N. MITRA, Supervisor, up to 17th February 1900 and from 22nd August to closure.</p> <p>ARVI.</p> <p>BABOO NARAYEN DASS, Temporary Upper Subordinate, from 18th February 1900 to 22nd August 1900.</p>			<p>NAGPUR CIVIL DIVISION.—(Contd.)</p> <p>WARDHA DISTRICT.—(Contd.)</p> <p>III.—Road Works.—(Concl'd.)</p> <p>(ii) Roads raised in Class.</p>	Rs.	Rs.
	13	7. Pulgaon	<p>Brought forward ...</p> <p>Raising Pulgaon-Nachangaon Road to Class I. Length 2½ miles.</p> <p>From 7th April 1900.</p> <p>To 30th June 1900.</p>	1,32,965 3,105	2,81,340 6,537
	14	8. Injhopur	<p>Raising Wardha-Waigaon Road to Class I. Length 7 miles.</p> <p>From 18th March 1900.</p> <p>To 13th October 1900.</p>	8,669	14,897
	15	Do.	<p>Raising Wardha-Deoli Road to Class I. Length 11 miles ...</p> <p>From 1st March 1900.</p> <p>To 30th September 1900.</p>	6,908	9,022
			Totals and Averages for (ii) Roads raised in Class ...	1,51,647	3,11,796
			(iii) Reserve Collection of Metal for Repairs and Renewals.		
	16	1. Sailu	<p>Metal collection on Wardha-Pownar Road. Length 5 miles.</p> <p>From 10th June 1900.</p> <p>To 15th September 1900.</p>	1,363	2,581
	17	5. Rohana, 7. Pulgaon and 10. Khoobgaon.	<p>Metal collection on Pulgaon-Arvi Road. Length 22 miles...</p> <p>From 12th December 1899.</p> <p>To 12th October 1900.</p>	60,778	1,67,690
			Totals and Averages for (iii) Reserve Collection of Metal, &c.	62,141	1,70,271
			Totals and Averages for Road Works (i), (ii) and (iii) ...	3,26,262	6,99,665
<p>WARDHA.</p> <p>BABOO J. N. MITRA, Supervisor, up to 17th February 1900 and from 22nd August to closure.</p> <p>ARVI.</p> <p>BABOO NARAYEN DASS, Temporary Upper Subordinate, from 18th February 1900 to 22nd August 1900.</p>			IV.—Village Tanks.		
	18	2. Nairee 4. Jam. 5. Rohana. 6. Alikeli. 7. Pulgaon. 8. Injhopur 10. Khoobgaon.	<p>Deepening 7 tanks and constructing 2 new tanks</p> <p>From 5th February 1900.</p> <p>To 30th September 1900.</p>	75,461	94,380
			Totals and Averages for IV.—Village Tanks ...	75,461	94,380

DIX B.—(Contd.)

arranged by Districts and Civil Divisions.—(Contd.)

Total number of day-units relieved.	Number of day-units relieved per rupee of expenditure on works only.	Ratio of famine to ordinary rates.	Average wage-basis in seers per rupee.	Duration of work.	Probable amount required to complete at Public Works Department normal rates	Remarks.
7	8	9	10	11	12	13
No.	No.	Ratio.	Seers.	Months.	Rs.	
3,637,848	..	.	...	...	33,707	
78,444	12	2'11	10½	2¾	..	Metal has been collected for a 6" coat, spread and consolidated. Work completed.
187,702	13	1'72	10¾	7	5,100	Earthwork has been completed for 5 miles; 9' moorum soling collected and consolidated; nallah approaches graded and dips metalled; mile and boundary stones provided. (For the Deputy Commissioner's remarks see item 10.)
117,286	13	1'30	10¾	7	8,393	1' moorum soling has been spread and consolidated throughout the first 7 miles; nallah approaches have been graded.
4,021,280	13	2 06	...	...	47,200	
29,661	11	1'89	11	3	...	Metal and moorum have been collected for repairs.
2,130,325	13	2'75	10½	10	...	Metal, moorum and bajri have been collected for repairs and a 9" reserve coat of metal collected for the whole length of 22 miles. The high ratio of famine to normal rates is due to long lead over which most of the metal and moorum had to be carried.
2,159,986	12	2 74	...	..	...
8,942,312	13	2'14	...	...	72,798	
1,255,438	13	1'25	10¾	7¾	...	Old tanks at Taligaon, Jam, Umri, Nachangaon, Wardha, Salod and Atvi have been deepened and improved. New tanks have been constructed at Samadrapur and Berul.
1,255,438	13	1'25	...	...	..

Abstract statement of work done by Famine labour,

Sub-Division and name of Sub-Divisional Officer.	Serial No	Name and Index No. of Charge.	Name and class of work, and dates of commencement and closure of work.	Value of work done at normal Public Works Department rates.	Total expenditure on Works—wages, gratuitous, and items of work done by contract.
1	2	3	4	5	6
WARDHA, BABOO J. N. MITRA, Supervisor.			NAGPUR CIVIL DIVISION.—(Contd.) WARDHA DISTRICT.—(Concl'd.) V.—Other Works—Miscellaneous.	Rs.	Rs.
	19	4. Jam	Improvements to Hinganghat Municipal roads From 1st July 1900. To 18th October 1900.	3,917	5,521
	20	Do.	Digging wells in six villages From 1st March 1900. To 30th June 1900.	3,211	5,264
	21	8. Injhopur	Improvements to Wardha Municipal roads From 1st March 1900. To 13th October 1900.	3,130	6,033
			Totals and Averages for V.—Other Works—Miscellaneous ...	10,258	16,818
			GRAND TOTALS AND AVERAGES FOR THE WARDHA DISTRICT..	4,47,848	9,08,760
CHANDA. RAI SAHIB N. N. MUKERJEE, Assistant Engineer.			CHANDA DISTRICT. I.—Railways.		
	1	10. Warora	Supplying rubble-stone to Great Indian Peninsula Railway at Warora. From 20th August 1900 To 26th August 1900.	879	1,832
			Totals and Averages for I.—Railways ...	879	1,832
			III.—Road Works. (i) New Roads.		
	2	2. Chimur	Constructing Warora-Chimur Road, 1st Section, 1 to 6 miles as Class I and 7 to 14 miles as Class II. Length 14 miles. From 15th October 1899. To 28th July 1900.	65,439	1,29,140
	2	7. Chargaon	Constructing 2nd Section from Gujgaon to Solari, 15 to 27 miles, as Class II. From 3rd November 1899. To 11th August 1900.	37,508	82,638
		10. Warora	Constructing 3rd Section from Salori to Warora, 6 miles, as Class II. From 27th November 1899. To 15th April 1900.	15,236	23,269
			Carried over ...	1,18,183	2,35,047

DIX B.—(Contd.)

arranged by Districts and Civil Divisions.—(Contd.)

Total number of day-units relieved.	Number of day-units relieved per rupee of expenditure on works only.	Ratio of famine to ordinary rates.	Average wage-basis in seers per rupee.	Duration of work.	Probable amount required to complete at Public Works Department normal rates.	Remarks.
7	8	9	10	11	12	13
No.	No.	Ratio.	Seers.	Months.	Rs.	
52,079	9	1'41	12½	3½	...	The main roads in Hinganghat and most of the branch roads were renewed with a 3" to 6" layer of metal and are now in very good order. The numbers relieved per rupee is small owing to special gangs being picked for ramming metal.
63,288	12	1'64	13½	4	...	19 new wells were dug in the Hinganghat Tahsil to the great advantage of the villagers.
78,703	13	1'92	10½	7½	...	About six miles of the Municipal roads were put into thoroughly good repairs.
194,070	12	1'64	...	...	...
11,577,633	13	2'03	11½	12	72,798	
18,343	10	2'08	10½	¼	...	The rather high ratio of famine to ordinary rate is due to the lead of 1½ miles, the cost of carrying by head-loads being the greatest part of the total cost.
18,343	10	2'08	...	...	...
1,566,054	12	1'97	10½	9½	40,000	This road is constructed as Class II throughout. For the first 6 miles from Chimur a 9" coat of metal has been collected; for the rest of the road moorum only has been provided. Earth-work has been completed from the 1st to 25th and 27th to 33rd mile and approaches to nallah crossings have been properly graded. Four wooden culverts were provided, two of which, however, have been washed away owing to the bursting of a tank. Walls of dry-stones have been provided for 12 nallah crossings in the first 10 miles from Chimur. Moorum soling has been spread for 26½ miles, and moorum has been collected at quarry for three more miles. The high ratio of famine to normal rates in the Chimur and Chargaon charges is due entirely to the carriage of moorum and metal by head-loads over long leads.
1,024,534	12	2'20	10½	9¼		
309,099	13	1'52	10½	4¾		
2,899,687	...	...	...	...	40,000	The Deputy Commissioner remarks :—" A most important trade route which should certainly be completed without delay."

Abstract statement of work done by Famine labour,

Sub-Division and name of Sub-Divisional Officer.	Serial No	Name and Index No. of Charge.	Name and class of work, and dates of commencement and closure of work.	Value of work done at normal Public Works Department rates.	Total expenditure on Works,—wages, gratuitous, and items of work done by contract.
1	2	3	4	5	6
CHANDA. RAI SAHIB N. N. MUKERJEE, Assistant Engineer.	3	5. Kotari	NAGPUR CIVIL DIVISION.—(Contd) CHANDA DISTRICT.—(Contd.) III.—Road Works.—(Contd) (i) New Roads —(Contd.) Brought forward ... Constructing Chanda-Sironcha Road, 1st Section as Class II. Length 22 miles. From 5th November 1899. To 21st July 1900.	Rs. 1,18,183 42,625	Rs 2,35,047 56,345
MUL. Mr. DUPEYRON, Temporary Assistant Engineer, up to 3rd May 1900. BABOO GOVIND GOPAL, Sub-Overseer, from 4th May 1900.	4	13 Ballapur	Constructing Talodhi-Mendki Road as Class II Length 11 miles From 15th April 1900 To 28th July 1900.	4,622	15,464
MUL. BABOO GOVIND GOPAL, Sub-Overseer, from 4th May 1900.	5	16 Chirool	Constructing the Mul-Chamursi Road as Class II. Length 16 miles. From 13th May 1900. To 28th July 1900.	4,154	9,358
ARMORI. LALA HARCHARAN DASS, Supervisor.	6	6. Armori, 8. Brahmapuri, and 12 Porla	Constructing Brahmapuri-Garchiroli Road as Class II. Length 34 miles— 1st Section ... 2nd Do. ... 3rd Do .. From 10th November 1899 To 27th October 1900	34,352 39,466 17,387	92,998 1,28,940 33,486
			Carried over ..	2,60,789	5,71,638

DIX B.—(Contd.)

arranged by Districts and Civil Divisions.—(Contd.)

Total number of day-units relieved.	Number of day-units relieved per rupee of expenditure on works only.	Ratio of famine to ordinary rates.	Average wage-basis in seers per rupee	Duration of work.	Probable amount required to complete at Public Works Department normal rates.	Remarks.
7	8	9	10	11	12	13
No.	No.	Ratio.	Seers	Months.	Rs.	
2,899,687	...	...	..	...	40,000	
672,256	12	1'32	10½	8½	42,536	This work was commenced from Kotari end, 22 miles from Chanda, and the first 10 miles have not been touched. Earthwork has been completed from mile 11 to 22 inclusive, and moorum soling collected and spread from mile 13 to 22 inclusive. Moorum has been collected at quarry sufficient for the 11th and 12th miles. Nallah approaches have been properly graded from mile 11 to 22; dry stone walls provided for three large nallahs, and boulder ramps for many of the smaller ones.
184,062	12	3'34	10	3½	10,378	The Deputy Commissioner remarks :—" A very important administrative road, but the cost of completion of the road to Sironcha being prohibitive, it would only be waste of money to complete this section. It should be made passable for traffic."
148,817	16	2'25	10	2½	17,846	Earthwork has been completed; nallah approaches graded in 2 miles and moorum soling spread in 1½ miles. 17,299 cft. of moorum is lying at quarry.
						The Deputy Commissioner remarks :—" Of second-rate importance."
1,113,846	12	2'71	10	11½	9,857	Earthwork has been completed for 1½ miles. Approaches to Mul River and also to one nallah have been completed. Moorum spread for 1 mile. Moorum collected at quarry 50 313 cft. Work was only started at the end of May and largely interrupted by cholera before being closed on the 21st July.
1,579,081	13	3'27				
490,925	15	1'93				
						The Deputy Commissioner remarks :—" Further expenditure on this road cannot be recommended "
						This road connects the important towns and villages of Brahmapuri, Armori, Porla and Garchiroli. Earthwork has been completed throughout, moorum collected and consolidated 9" thick throughout. 224,882 cft. of moorum has been collected at roadside. Nallah crossings 12 in all; of these 3 have been provided with masonry culverts, 4 with dry-stone walls with properly graded approaches, and the remaining 5 have only had their approaches graded. There are 6 rivers including the Waingunga for which approaches only have been graded.
						The Deputy Commissioner remarks :—" The road should be made passable for cart traffic at all costs, and the section between Brahmapuri and Armori should certainly be completed if funds are available."
7,088,674	..	...	...	...	1,20,617	

Abstract statement of work done by Famine labour,

Sub-Division and name of Sub-Divisional Officer.	Serial No.	Name and Index No. of Charge.	Name and class of work, and dates of commencement and closure of work.	Value of work done at normal Public Works Department rates.	Total expenditure on Works,—wages, gratuitous, and items of work done by contract.
1	2	3	4	5	6
ARMORI. LALA HARCHARAN Dass, Supervisor.			NAGPUR CIVIL DIVISION.—(Contd.) CHANDA DISTRICT.—(Contd.) III.—Road Works.—(Contd.) (i) New Roads —(Concl'd.)	Rs.	Rs.
			Brought forward ...	2,60,789	5,71,638
	7	5 Brahmapuri and 15. Giwardha.	Constructing Brahmapuri-Giwardha Road as Class II. Length 19 miles. From 7th May 1900. To 9th September 1900.	22,314	51,635
	8	6 Armori	Constructing 1st Section of the Armori-Talodhi Road up to Mendki as Class II. Length 8 miles. From 29th January 1900. To 31st August 1900.	17,577	40,084
	9	4 Garchiroli and 12. Porla.	Constructing Garchiroli-Chamursi Road as Class II. Length 21 miles. From 10th April 1900. To 31st August 1900.	21,817	69,172
	10	11. Dhanora	Constructing Dhanora Muramgaon Road as Class II. Length 14 miles. From 5th December 1899. To 19th May 1900.	15,676	30,543
Totals and Averages for (i) New Roads ...				3,38,173	7,63,072

DIX. B.—(Contd.)

arranged by Districts and Civil Divisions.—(Contd.)

Total number of day-units relieved.	Number of day-units relieved per rupee of expenditure on works only.	Ratio of famine to ordinary rates.	Average wage-basis in seers per rupee.	Duration of work.	Probable amount required to complete at Public Works Department normal rates	Remarks.
7	8	9	10	11	12	13
No.	No.	Ratio.	Seers.	Months.	Rs.	
7,088,674	...	...	...	...	1,20,617	
685,703	13	2'31	9	4	49,563	This road is intended to connect Brahmapuri with Giwardha, and will be useful for the transport of jungle produce and rice. Earthwork has been completed for 11 out of 19 miles; moorum soling collected and spread 9" thick from 6 to 11 miles inclusive. Moorum soling has been collected at roadside in 2nd mile, 24,948 cft., and at quarry in 1st mile 296,782 cft. Approaches to nallah crossings have been graded in all the small nallahs. The approaches in case of the Wainganga and Gauri rivers have only been partially graded.
491,027	12	2 28	10	7	782	The Deputy Commissioner remarks:—"Cannot recommend any further expenditure upon this road."
837,068	12	3'17	9½	4½	24,959	This road is intended to connect Armori on the Brahmapuri-Garchiroli Road with Talodhi on the Mul-Umrer Road. Earthwork has been completed on the 8 miles, from the Wainganga River in the 11th mile of the Brahmapuri-Garchiroli Road to Mendki. Moorum collection and consolidation, 9" thick, have been completed throughout. 79,635 cft. of moorum collected and carried to roadside in mile 4. Approaches of 3 nallah crossings have been graded and dry-stone pavements with up and downstream walls provided. Two dry-stone culverts have also been provided.
345,142	11	1'95	9¾	5½	14,038	The Deputy Commissioner remarks:—"Not an important road at present."
						This road is intended to connect the large villages of Garchiroli and Chamursi. Earthwork has been completed for 13 out of 21 miles. Moorum soling, 9" thick, has been collected and consolidated on 12 miles. Three nallah crossings have had their approaches graded. The high ratio of famine to normal rate is due to this work having been carried out in the hot weather and monsoon.
						The Deputy Commissioner remarks:—"Cannot recommend further expenditure upon this road."
						This road is a continuation of the Chanda-Mul-Garchiroli-Dhanora Road and is intended to still further improve the communication with the Eastern Zamindaris. Earthwork has been completed throughout; moorum collected and carried to roadside in miles 47 and 53. All nallah crossings have had their approaches properly graded.
						The Deputy Commissioner remarks:—"Cannot recommend further expenditure upon this road."
9,447,614	12	2'26	...	...	2,09,959	

Abstract statement of work done by Famine labour,

Sub-Division and name of Sub-Divisional Officer.	Serial No.	Name and Index No. of Charge.	Name and class of work, and dates of commencement and closure of work.	Value of work done at normal Public Works Department rates.	Total expenditure on Works—wages, gratuitous, and items of work done by contract.
1	2	3	4	5	6
<p>CHANDA.</p> <p>RAI SAHIB N. N. MUKHERJEE, Assistant Engineer.</p>			NAGPUR CIVIL DIVISION.—(Contd.)		
			CHANDA DISTRICT.—(Contd.)		
			III.—Road Works —(Contd.)		
			(ii) Roads raised in Class.	Rs.	Rs.
	11	10. Warora ...	Raising Warora-Pattala Road to Class I. Length 7½ miles. From 3rd July 1900. To 6th October 1900.	4,596	9,785
<p>MUL.</p> <p>LALA HARCHARAN DASS, Supervisor from 15th October 1899 to 29th January 1900, and from 28th August 1900 to 27th October 1900; Mr. DUREVION, Temporary Assistant Engineer, from 30th January 1900 to 3rd May 1900; BABOO GOVIND GOPAL, Sub-Overseer, from 4th May 1900 to 27th August 1900.</p>	12	1. Mul and 3. Talodi.	Metal and moorum collection on Mul-Umrer Road for raising to Class I. Length 48 miles. From 15th October 1899. To 25th October 1900.	1,04,909	1,81,152
	13	11. Dhanora and 12. Porla.	Raising Garchiroli-Dhanora Section of Mul-Murumgaon Road to Class II. Length 22 miles. From 23rd March 1900. To 31st August 1900.	12,849	17,682
<p>ARMORI.</p> <p>LALA HARCHARAN DASS, Supervisor.</p>			Carried over ...	1,22,354	2,08,619

DIX B.—(Contd.)

arranged by Districts and Civil Divisions.—(Contd.)

Total number of day-units relieved.	Number of day-units relieved per rupee of expenditure on works only.	Ratio of famine to ordinary rates.	Average wage-basis in seers per rupee.	Duration of work.	Probable amount required to complete at Public Works Department normal rates.	Remarks.
7	8	9	10	11	12	13
No.	No.	Ratio.	Seers.	Months.	Rs.	
117,420	12	2'13	10½	3	25,000	This work was taken up very late on the completion of the Warora tank works. Rubble has been collected for 3 miles at a depot in the first mile; and metal broken for a 4½" coat for ¾ths of a mile. The Deputy Commissioner remarks:—"Next to Chanda-Warora, the most important trade route in the district. It is from every point of view important and the completion of the road is most urgent. I have written up about this road more than once."
2,264,704	12	1'72	10	12¼	...	Metal and moorum, sufficient for metalling the road, have been collected. The Deputy Commissioner remarks:—"Further expenditure on this road cannot be recommended."
259,218	15	1'38	9¾	5¼	14,613	This, an existing III-B Road, has had 9" coat of moorum spread and consolidated over 9½ miles. 27,745 cft. of moorum is lying at quarry. The Deputy Commissioner remarks:—"Cannot recommend further expenditure upon this road."
2,641,342	...	...	...	...	39,613	

Abstract statement of work done by Famine labour,

Sub-Division and name of Sub-Divisional Officer.	Serial No.	Name and Index No. of Charge.	Name and class of work, and dates of commencement and closure of work.	Value of work done at normal Public Works Department rates.	Total expenditure on Works,—wages, gratuitous and items of work done by contract.
1	2	3	4	5	6
<p>MUL AND ARMORI.</p> <p>LALA HARCHARAN DASS, Supervisor.</p> <p>CHANDA.</p> <p>RAI SAHIB N. N. MUKERJEE, Assistant Engineer.</p> <p>MUL.</p> <p>LALA HARCHARAN DASS, Supervisor, from 15th October 1899 up to 29th January 1900; Mr. DUREYON, Temporary Assistant Engineer, from 30th January 1900 to 3rd May 1900; BABOO GOVIND GOPAL, Sub-Overseer, from 4th May 1900 to 31st August 1900; RAI SAHIB N. N. MUKERJEE, Assistant Engineer, from 31st August 1900 to 10th October 1900.</p>			<p>NAGPUR CIVIL DIVISION:—(Contd.)</p> <p>CHANDA DISTRICT.—(Contd.)</p> <p>III.—Road Works.—(Contd.)</p> <p>(ii) Roads raised in Class.—(Concl'd.)</p>	Rs.	Rs.
			Brought forward ...	1,22,354	2,08,619
	14	1. Mul and 4. Gar-chiroli.	Collection of metal and moorum for metalling the Mul-Gar-chiroli Section of Mul-Murungaon Road. Length 24 miles.	26,841	60,498
			From 25th October 1899.		
			To 6th April 1900.		
	15	6. Armori and 8. Brahmapuri.	Collection of metal and moorum for metalling the Brahma-puri-Nagbir Road, length 12 miles.	26,909	65,454
			From 21st January 1900.		
			To 27th October 1900.		
			Totals and Averages for (ii) Roads raised in Class ...	1,76,104	3,34,571
	16	9. Chanda ...	(iii) Reserve Collection of Metal for Repairs and Renewals. Collection of metal and moorum on miles 78 to 95 of the Southern Road (Warora to Chanda).	20,551	31,494
			From 26th November 1899.		
			To 7th October 1900.		
	17	1. Mul and 9. Chanda.	Metal and moorum collection on Chanda-Mul Road. Length 27 miles.	44,246	1,13,843
			From 15th October 1899.		
			To 10th October 1900.		
			Totals and Averages for (iii) Reserve Collection of Metal, &c.	64,797	1,45,337
			Totals and Averages for Road Works (i), (ii) and (iii) ...	5,79,074	12,42,980

DIX B.—(Contd.)

arranged by Districts and Civil Divisions.—(Contd.)

Total number of day-units relieved.	Number of day-units relieved per rupee of expenditure on works only.	Ratio of famine to ordinary rates.	Average wage-basis in seers per rupee.	Duration of work.	Probable amount required to complete at Public Works Department normal rates.	Remarks.
7	8	9	10	11	12	13
No.	No.	Ratio.	Seers.	Months	Rs.	
2,641,342	...	...	...	...	37,613	
745,580	12	2'25	9½	5½	26,212	Metal has been broken and stacked at roadside in 1 to 2 and 14 to 24 miles inclusive. The somewhat high ratio of famine to normal rates is due to the long leads for carriage by head-loads, viz., from 2 to 3 miles.
						The Deputy Commissioner remarks:—"This is a useful section of the road and should be completed if possible."
778,678	12	2'43	10	9½	3,393	Metal in excess of requirements has been collected at quarry and in every mile except the 1st and 2nd miles. The high ratio of famine to normal rates is due as usual to the excessive cost of carrying by head-loads.
						The Deputy Commissioner remarks:—"It should be metalled when opportunity offers. There is heavy traffic upon it."
4,165,600	12	1'90	...	...	69,218	
319,992	10	1'53	10	10½	...	Two 4½" coats of metal have been collected in mile 96; 116,163 cft. for miles 93 to 99; 9,528,166 cft. at quarry in mile 83; and 8,439,277 cft. in 70th mile. 7,200 cft. rubble has been collected in mile 72. Moorum lying at quarries 31,117 cft.
1,567,842	12	2'57	10	12	...	Two 4½" reserve coats of metal have been provided in miles 1 to 5, 10 to 13, and 17 to 27; moorum collection miles 1 to 5, 21,129 cft. per mile, and from 24th to 27th mile about 31,120 cft. per mile. Miles 22 and 23 have got 2,622 and 10,560 cft. of moorum only. The high ratio of famine to normal rates is due to the heavy cost of carriage by head-loads, amounting to 40 per cent. of the whole expenditure on works.
1,687,834	12	2'24	...	...	...
15,501,048	12	2'15	...	...	2,72,177	

Abstract statement of work done by Famine labour,

Sub-Division and name of Sub-Divisional Officer.	Serial No.	Name and Index No. of Charge.	Name and class of work, and dates of commencement and closure of work.	Value of work done at normal Public Works Department rates.	Total expenditure on Works,—wages, gratuitous and items of work done by contract.
1	2	3	4	5	6
MUL. LALA HARCHARAN DASS, Supervisor.			NAGPUR CIVIL DIVISION.—(Contd.) CHANDA DISTRICT.—(Contd.) IV.—Village Tanks.	Rs.	Rs.
	18	1. Mul, 2. Chimur, 3. Talodi, 6. Armori, 8. Brahmapuri, 9. Chanda, 10. Warora, 13. Ballapur and 14. Nowtala.	Constructing and repairing 31 Village Tanks From 7th April 1900. To 28th July 1900.	65,198	78,619
			Totals and Averages for IV.—Villages Tanks	65,198	78,619
			V.—Other Works—Miscellaneous.		
	19	..	Constructing new wells on the Mul-Murumgaon Road	3,397	3,397
	20	...	Constructing new wells on the Chanda-Mul Road	1,878	1,878
	21	.	Deepening wells on the Chanda-Mul Road	873	873
			Totals and Averages for V.—Other Works—Miscellaneous	6,148	6,148
			GRAND TOTALS AND AVERAGES FOR THE CHANDA DISTRICT..	6,51,299	13,29,579
			BHANDARA DISTRICT.		
KORUMBI. AMGAON. Lieut. H. de L. POLLARD LOVSELY, R. E., Assistant Engineer; MR. H. E. CONLAN, Temporary Upper Sub-ordinate, from 16th April 1900 to 28th July 1900.			I.—Railways.		
	1	9. Ambhora	Constructing Satpura Railway From 16th February 1900. To 4th October 1900.	16,145	24,168
			Totals and Averages for I.—Railways	16,145	24,168
			III.—Road Works.		
			(i) New Roads.		
	2	5. Korumbi and 7. Adyar.	Constructing the Kardha-Pauni Road as Class II. Length 26 miles. From 25th November 1899. To 11th October 1900.	65,407	1,55,528
			Carried over	65,407	1,55,528

DIX B.—(Contd.)

arranged by Districts and Civil Divisions.—(Contd.)

Total number of day-units relieved.	Number of day-units relieved per rupee of expenditure on works only.	Ratio of famine to ordinary rates.	Average wage-basis in seers per rupee.	Duration of work.	Probable amount required to complete at Public Works Department normal rates.	Remarks.
7	8	9	10	11	12	13
No.	No.	Ratio.	Seers.	Months.	Rs.	
968,993	12	1'21	10	3¼	...	All completed as per estimates
968,993	12	1'21	...	...	...
...	...	...	...	...	...	These works call for no particular remarks: 2 were provided for the Garchiroli and Dhanora Charges, 3 for the Mul Charge.
...	
...	...	...	...	...	...	Old wells were deepened and cleaned for the Chanda Charge.
...	
16,288,384	12	2'04	10	12	2,79,177	
344,958	14	1'50	11½	7½	...	Earthwork has been completed and ballast collected.
344,958	14	1'50	...	...	...
2,104,352	14	2'36	11	10½	33,040	Earthwork has been completed throughout and moorum consolidated up to 22nd mile. The Deputy Commissioner remarks :—" The most important and useful road."
2,104,352	...	...	...	...	33,040	

Abstract statement of work done by Famine labour,

Sub-Division and name of Sub-Divisional Officer.	Serial No.	Name and Index No. of Charge.	Name and class of work, and dates of commencement and closure of work.	Value of work done at normal Public Works Department rates.	Total expenditure on Works,—wages, gratuitous and items of work done by contract.
1	2	3	4	5	6
<p>AMGAON.</p> <p>M'LEUT. H. DE L. POLLARD-LOWSLEY, R. E., Assistant Engineer.</p> <p>MR. H. E. CONLAN, Temporary Upper Subordinate, from 16th April 1900 to 28th July 1900.</p>			<p>NAGPUR CIVIL DIVISION.—(Contd.)</p> <p>BIHANDARA DISTRICT.—(Contd.)</p> <p>III.—Road Works.—(Contd.)</p> <p>(i) New Roads.—(Concl'd.)</p>	Rs.	Rs.
			Brought forward ...	65,407	1,55,523
	3	10. Mohari ...	Constructing Mohari-Tumsar Road as Class II. Length 7 miles. From 22nd February 1900. To 20th September 1900.	13,494	16,473
	4	8. Baheria ...	Constructing Tirora-Khairlanji Road as Class II. Length 14 miles. From 6th December 1899. To 15th October 1900.	50,544	1,34,016
	5	6. Amgaon ...	Construction of branch road to Amgaon village as Class II... From 20th November 1899. To 21st July 1900.	375	739
			Totals and Averages for (i) New Roads ...	1,29,820	3,06,756

DIX B.—(Contd.)

arranged by Districts and Civil Divisions.—(Contd.)

Total number of day-units relieved.	Number of day-units relieved per rupee of expenditure on works only.	Ratio of famine to ordinary rates.	Average wage basis in seers per rupee.	Duration of work.	Probable amount required to complete at Public Works Department normal rates.	Remarks.
7	8	9	10	11	12	13
No.	No.	Ratio.	Seers.	Months.	Rs.	
2,104,352	...	...	...	...	33,040	
207,116	13	1'22	11	7	10,161	Earthwork is practically completed. The Deputy Commissioner remarks :—" Important road ; should be completed."
1,822,625	14	2'65	11	10	15,236	Earthwork and moorum soling have been completed up to the Wainganga River and 23 culverts constructed. The Deputy Commissioner remarks.—" It would no doubt be of benefit if completed."
11,527	16	1'97	11½	9	...	The road is completed as Class II
4,145,620	14	2'36	...	...	58,437	

Abstract statement of work done by Famine labour,

Sub-Division, and name of Sub-Divisional Officer.	Serial No.	Name and Index No. of Charge.	Name and class of work, and dates of commencement and closure of work.	Value of work done at normal Public Works Department rates.	Total expenditure on Works,—wages, gratuitous and items of work done by contract.
1	2	3	4	5	6
SAKOLI. LIEUT. H. DE L. POLLARD-LOWSLEY, R. E., Assistant Engineer. MR. B. WOODS, Temporary Upper Subordinate, from 10th November 1899 to 13th April 1900. " F. C. WILLES, Temporary Engineer, from 14th April 1900 to 5th June 1900. MUNSHI S. SAFFAR Ali, Temporary Upper Subordinate, from 6th June 1900 to 18th June 1900. BABOO K. M. GHOSH, Temporary Engineer, from 19th June 1900 to closure.			NAGPUR CIVIL DIVISION.—(Contd.) BHANDARA DISTRICT.—(Contd.) III.—Road Works.—(Contd.) (ii) Roads raised in Class.		
	6	4 Saongi	... Metal collection on miles 27 and 28 of the Gondia-Arjuni Road for raising to Class I. From 6th December 1899. To 18th October 1900.	Rs. 6,623	Rs. 20,873
BHANDARA. LIEUT. H. DE L. POLLARD-LOWSLEY, R. E., Assistant Engineer.	7	1 Dongri	... Metal collection on Tumsar-Katangji Road for raising to Class I. Length 25 miles. From 15th October 1899. To 19th August 1900.	58,524	1,07,794
			Totals and Averages for (ii) Roads raised in Class ...	65,147	1,28,667

DIX B.—(Contd.)

arranged by Districts and Civil Divisions.—(Contd.)

Total number of day-units relieved.	Number of day-units relieved per rupee of expenditure on works only.	Ratio of famine to ordinary rates.	Average wage-basis in seers per rupee.	Duration of work.	Probable amount required to complete at Public Works Department normal rates.	Remarks.
7	8	9	10	11	12	13
No.	No.	Ratio.	Seers.	Months.	Rs.	
243,375	12	3'15	10½	9¼	...	Metal collected along the road.
1,491,638	14	1'84	10½	10	...	Metal collected along the road.
1,735,013	13	1'97	...	...	...

Abstract statement of work done by Famine labour,

Sub-Division, and name of Sub-Divisional Officer.	Serial No.	Name and Index No. of Charge.	Name and class of work, and dates of commencement and closure of work.	Value of work done at normal Public Works Department rates.	Total expenditure on Works,—wages, gratuitous and items of work done by contract.
1	2	3	4	5	6
<p>SAKOLI AND KORUMBI.</p> <p>LIEUT. H. DE L. POLLARD-LOWSLEY, R. E., Assistant Engineer.</p> <p>Mr. B. Woods, Temporary Upper Subordinate, from 10th November 1899 to 13th April 1900.</p> <p>Mr. F. C. WILLES, Temporary Engineer, from 14th April 1900 to 5th June 1900.</p> <p>MUNSHI S. SARDAR ALI, Temporary Upper Subordinate, from 6th June 1900 to 18th June 1900.</p> <p>BABOO K. M. GHOSH, Temporary Engineer, from 19th June 1900 to closure.</p>			<p>NAGPUR CIVIL DIVISION.—(Contd.)</p> <p>BHANDARA DISTRICT.—(Contd.)</p> <p>III.—Road Works.—(Contd.)</p> <p>(iii) Reserve Collection of Metal for Repairs and Renewals.</p>		
	8	2 Sakoli, 4 Saongi, 5 Korumbi and 12 Lakhni.	<p>Collection of reserve coats of metal on the Great Eastern Road, miles 32 to 75.</p> <p>From 15th October 1899.</p> <p>To 30th August 1900.</p>	Rs. 1,28,757	Rs. 3,45,430
			Carried over ...	1,28,757	3,45,430

DIX B.—(Contd.)

arranged by Districts and Civil Divisions.—(Contd.)

Total number of day-units relieved.	Number of day-units relieved per rupee of expenditure on works only.	Ratio of famine to ordinary rates.	Average wage-basis in seers per rupee.	Duration of work.	Probable amount required to complete at Public Works Department normal rates.	Remarks.
7	8	9	10	11	12	13
No	No.	Ratio.	Seers.	Months.	Rs.	
4,474,046	13	2.68	10½	10½	...	Metal has been collected along the road from mile 32 to 75 with the exception of miles 36, 37, 38, 39 and 56.
4 474,046	...	...	...	...	..

Abstract statement of work done by Famine labour,

Sub-Division, and name of Sub-Divisional Officer.	Serial No.	Name and Index No. of Charge.	Name and class of work, and dates of commencement and closure of work	Value of work done at normal Public Works Department rates.	Total expenditure on Works,—wages, gratuitous and items of work done by contract.
1	2	3	4	5	6
KORUMBI. Mr. W. B. SIMON, Temporary Upper Subordinate, from 10th November 1899 to 9th February 1900. " H. E. CONLAN, Temporary Upper Subordinate, from 10th February 1900 to 4th April 1900. MUNSHI S. SAYDAR ALI, Temporary Upper Subordinate, from 5th April 1900 to 12th June 1900.			NAGPUR CIVIL DIVISION.—(Contd) BHANDARA DISTRICT.—(Contd) III.—Road Works.—(Contd.) (iii) Reserve collection of Metal for Repairs and Renewals.—(Contd)	Rs.	Rs
	9	5 Korumbi	Brought forward ... Metal collection on the 12th mile of the Bhandara Chord Line From 15th November 1899 To 11th May 1900.	1,28,757 702	3,45,430 1,846
BHANDARA. Lieut. H. DE L. POLLARD-LOWSEY, R. E., Assistant Engineer.	10	3 Khairlanji and 11 Sehora	Metal collection on miles 7 to 22 of the Tumsar-Rampalli Road. From 15th October 1899 To 11th August 1900.	63,132	1,80,886
			Carried over ...	1,92,591	5,28,162

DIX B.—(Contd.)

arranged by Districts and Civil Divisions.—(Contd.)

Total number of day-units relieved.	Number of day-units relieved per rupee of expenditure on works only.	Ratio of famine to ordinary rates.	Average wage-basis in seers per rupee.	Duration of work.	Probable amount required to complete at Public Works Department normal rates.	Remarks.
7	8	9	10	11	12	13
No.	No	Ratio.	Seers.	Months.	Rs	
4 474,046	...	...	...	..	...
25,783	14	2 63	11½	5	...	Metal collected along the road.
2,576,730	14	2 87	11	9	...	Metal collected along the road.
7,076,559	...	...	...	...	...

Abstract statement of work done by Famine labour,

Sub-Division, and name of Sub-Divisional Officer.	Serial No.	Name and Index No. of Charge.	Name and class of work, and dates of commencement and closure of work.	Value of work done at normal Public Works Department rates	Total expen- diture on Works,— wages, gra- tuitous and items of work done by con- tract.
1	2	3	4	5	6
<p style="text-align: center;">BHANDARA. LIEUT. H. DE L. POLLARD-LOWSLEY, R. E., Assistant Engineer.</p> <p style="text-align: center;">AMGAON. LIEUT. H. DE L. POLLARD-LOWSLEY, R. E., Assistant Engineer. Mr. H. E. CONLAN, Temporary Upper Subordinate, from 16th April 1900 to 28th July 1900</p>			NAGPUR CIVIL DIVISION.—(Contd)		
			BHANDARA DISTRICT.—(Contd)		
			III.—Road Works.—(Concl'd.)		
			(iii) Reserve collection of Metal for Repairs and Renewals.—(Concl'd)	Rs.	Rs
			Brought forward	1,92,591	5,28,162
	11	6 Amgaon	Metal collection on Amgaon-Satgaon and Amgaon-Lanji Roads. Length 15 miles. From 20th November 1899. To 21st July 1900.	39,065	1,10,020
	12	9 Ambhora ...	Metal collection on miles 1 to 7 of Gondia-Balaghat Road and 1 to 2 of Gondia-Pulchur Road. From 16th February 1900. To 4th October 1900.	9,576	49,631
	13	10 Mohari ...	Collection of metal on Bhandara Railway Feeder Road. Length 7 miles. From 22nd February 1900. To 20th September 1900.	3,333	4,302
	14	Do. ...	Collection of metal for Mohari-Bhandara Station Road ... From 22nd February 1900. To 20th September 1900.	6,751	25,455
			Totals and Averages for (iii) Reserve collection of Metal, &c.	2,51,316	7,17,570
			Totals and Averages for Road Works (i), (ii) and (iii) ...	4,46,283	11,52,993

DIX B.—(Contd.)

arranged by Districts and Civil Divisions.—(Contd.)

Total number of day-units relieved.	Number of day-units relieved per rupee of expenditure on works only.	Ratio of famine to ordinary rates.	Average wage-basis in seers per rupee.	Duration of work.	Probable amount required to complete at Public Works Department normal rates	Remarks.
7	8	9	10	11	12	13
No.	No.	Ratio.	Seers.	Months.	Rs.	
7,076,559	...	...	...	...	...
1,716,064	16	2.82	11	8	...	Metal has been collected along Amgaon-Satgaon Road, from mile 1 to 4 and along Amgaon-Lanji Road from mile 1 to 7.
704,273	14	5.18	11½	7½	...	Metal has been collected along Gondia-Balaghat Road from mile 1 to 7 and for one mile along Gondia-Pulchur Road.
54,089	13	1.29	11	7	...	Metal collected along the road.
320,047	13	3.77	11	7	...	Metal collected.
9,871,032	14	2.86	...	...	...
15,751,665	14	2.58	...	...	58,437	

Abstract statement of work done by Famine labour,

Sub-Division, and name of Sub-Divisional Officer.	Serial No.	Name of Index No. of Charge.	Name and class of work, and dates of commencement and closure of work.	Value of work done at normal Public Works Department rates.	Total expenditure on Works,—wages, gratuitous and items of work done by contract.
1	2	3	4	5	6
<p>KIRNAPUR.</p> <p>Mr. O. St. J. DALY, Temporary Upper Subordinate.</p> <p>SATPURA RAILWAY.</p> <p>Mr. J. W. MULRONEY, Temporary Engineer.</p> <p>BAIHIR.</p> <p>LALA KARAMEHAND, Overseer.</p>	15	1 Dongri, 2 Sakoli, 3 Khairlanji, 4 Saongi and 11 Sehora.	<p>NAGPUR CIVIL DIVISION.—(Contd.)</p> <p>BHANDARA DISTRICT.—(Contd.)</p> <p>IV.—Village Tanks.</p> <p>Repairing 10 Village Tanks</p> <p>From 15th October 1899.</p> <p>To 30th August 1900.</p>	Rs.	Rs.
			...	17,501	16,767
			GRAND TOTALS AND AVERAGES FOR THE BHANDARA DISTRICT.	4,79,929	11,93,928
			BALAGHAT DISTRICT.		
			I.—Railways.		
			Construction of the Satpura Railway	...	1,63,896
			From 15th October 1899.		2,87,943
			To 14th October 1900.		
			Totals and Averages for I.—Railways	...	1,63,896
					2,87,943

DIX B.—(Contd.)

arranged by Districts and Civil Divisions.—(Contd.)

Total number of day-units relieved.	Number of day-units relieved per rupee of expenditure on works only.	Ratio of famine to ordinary rates.	Average wage-basis in seers per rupee.	Duration of work.	Probable amount required to complete at Public Works Department normal rates.	Remarks.
7	8	9	10	11	12	13
No.	No.	Ratio.	Seers.	Months.	Rs.	
221,658	13	0.96	11	10½	...	All completed.
16,318,281	14	2.48	10½	12	58,437	
3,765,508	13	1.76	9	12	...	Earthwork has been completed and ballast collected.
3,765,508	13	1.76	...	...	...

Abstract statement of work done by Famine labour,

Sub-Division, and name of Sub-Divisional Officer.	Serial No	Name and Index No. of Charge.	Name and class of work, and dates of commencement and closure of work.	Value of work done at normal Public Works Department rates.	Total expenditure on Works.—wages, gratuities and items of work done by contract.
1	2	3	4	5	6
BALAGHAT (WESTERN). SERGEANT J. H. ACHESON, Overseer. KIRNAPUR. Mr. O. St. J. DALY, Temporary Upper Subordinate. BALAGHAT (WESTERN). SERGEANT J. H. ACHESON, Overseer. BAIHIR. LALA KARANCHAND, Overseer.			NAGPUR CIVIL DIVISION.—(Contd.) BALAGHAT DISTRICT.—(Contd.) III.—Road Works. (i) New Roads.	Rs.	Rs.
	2	7 Lalburra.	Constructing Lalburra-Somnapur Railway Feeder Road as Class II. Length 7 miles. From 19th November 1899. To 19th May 1900.	15 835	25 497
	3	2 Kirnapur	Constructing Birsola Railway Feeder Road Length 3 miles. From 16th October 1899. To 7th October 1900.	6 976	10,457
	4	Do.	Constructing Rajgaon-Kirnapur Road. Length 7 miles .. From 16th October 1899. To 7th October 1900.	20,292	79 416
	5	1 Katangi	Constructing Katangi-Seoni Road up to border as Class II Length 5 miles. From 15th October 1899. To 20th October 1900.	14 513	40 906
	6	Do.	Constructing Waraseoni-Katangri Road as Class II. Miles 10 to 19. From 15th October 1899. To 20th October 1900.	48,134	1,05 153 .
	7	4 Lamtha	Constructing Balaghat-Baihar Road, 3rd Section as Class II. Miles 36 to 42. From 15th October 1899. To 1st October 1900	23 008	41,648
			Totals and Averages for (i) New Roads	1,28,758	3,03 277

DIX B.—(Contd.)

arranged by Districts and Civil Divisions.—(Contd.)

Total number of day-units relieved.	Number of day-units relieved per rupee of expenditure on works only.	Ratio of famine to ordinary rates.	Average wage-basis in seers per rupee.	Duration of work	Probable amount required to complete at Public Works Department normal rates.	Remarks.
7	8	9	10	11	12	13
No.	No	Ratio.	Seers.	Months.	Rs.	
358,544	14	1'61	12	6	7,276	Earthwork has been completed and moorum partially collected along road. The Deputy Commissioner remarks:— "Useful feeder road for railways."
139,875	13	1'50	11	11½	1,661	Earthwork, moorum collection and consolidation have been completed.
1,062,281	13	3'91	11	11¼	5,154	Earthwork, moorum collection and consolidation have been completed. The Deputy Commissioner remarks:— "Should certainly be completed as a Class II Road."
535,770	13	2'82	11	12	4,061	Completed as a Class II Road except road dams. The Deputy Commissioner remarks:— "A useful road, but not very important."
1,380,138	13	2'18	11	12	5,818	Complete except road dams and mile-stones The Deputy Commissioner remarks:— "An important road ; should be completed."
479,840	11	1'82	9½	11½	8,536	Completed as a Class II Road except causeways and metal collected along roadside. The Deputy Commissioner remarks:— "Most important road ; should be completed as early as possible."
3,956,448	13	2'36	...	...	32,506	

Abstract statement of work done by Famine labour,

Sub-Division, and name of Sub-Division- al Officer.	Serial No.	Name and Index No. of Charge.	Name and class of work, and dates of commencement and closure of work.	Value of work done at normal Public Works Department rates.	Total expen- diture on Works,— wages, gra- tuitous and items of work done by con- tract.
1	2	3	4	5	6
BAIHAR. BALAGHAT (WESTERN). Sergeant J. H. Achinson, Temporary Upper Subordinate. KIRNAPUR. Mr. O. St. J. DALY, Temporary Upper Subordinate. BALAGHAT (WESTERN). Sergeant J. H. Achinson, Overseer.			NAGPUR CIVIL DIVISION.—(Contd.) BALAGHAT DISTRICT.—(Contd.) III.—Road Works.—(Contd.) (ii) Roads raised in Class.	Rs.	Rs.
	8	4 Lamtha, a n d 6 Jangal.	Collection of metal for raising the Lamtha-Baihar Road ... From 15th October 1899. To 14th October 1900.	16,283	56,835
	9	7 Lalburra ...	Raising Balaghat-Seoni Road. Miles 32 to 46 to Class I ... From 19th November 1899. To 19th May 1900.	23,106	61,848
	10	2 Kirnapur ...	Raising 18th mile of Langi-Kirnapur Road ... From 16th October 1899. To 7th October 1900.	1,923	4,955
	11	3 Waraseoni ...	Raising and repairing Rampaili-Waraseoni-Lalburra Road, 1st Section Miles 1 to 10. From 15th October 1899. To 13th October 1900.	43,266	86,930
	12	Do ...	Raising Waraseoni-Balaghat Road. Miles 5 to 10 ... From 15th October 1899 To 13th October	9,372	39,716
			Carried over ...	93,950	2,50,284

DIX B.—(Contd.)

arranged by Districts and Civil Divisions.—(Contd.)

Total number of day-units relieved.	Number of day-units relieved per rupee of expenditure on works only.	Ratio of famine to ordinary rates.	Average wage-basis in seers per rupee.	Duration of work.	Probable amount required to complete at Public Works Department normal rates.	Remarks.
7	8	9	10	11	12	13
No.	No.	Ratio.	Seers.	Months	Rs.	
658,422	12	3'49	10	12	...	Metal and moorum collected.
876,042	14	2'68	12	6	...	Metal and moorum collected.
66,279	13	2'57	11	11 $\frac{3}{4}$	...	Metal collected
1,062,285	12	2'01	11	12	...	Metal and moorum collected and road repaired.
485,726	12	4'24	11	12	...	Road repaired and moorum collected.
3,148,754	...	...	...	...	...

Abstract statement of work done by Famine labour.

Sub-Division, and name of Sub-Divisional Officer.	Serial No.	Name and Index No. of Charge.	Name and class of work, and dates of commencement and closure of work.	Value of work done at normal Public Works Department rates	Total expenditure on Works,—wages, gratuities and items of work done by contract.
1	2	3	4	5	6
BALAGHAT (WESTERN). SERGEANT J. H. ACHESON, Overseer.			NAGPUR CIVIL DIVISION.—(Concl'd.) BALAGHAT DISTRICT.—(Concl'd.) III.—Road Works.—(Concl'd.) (ii) Roads raised in Class.—(Concl'd.)	Rs.	Rs.
			Brought forward ...	93,950	2,50,284
	13	3 Waraseoni	Raising and repairing Waraseoni-Katangi Road Miles 1 to 10. From 15th October 1899. To 13th October 1900.	53,173	99,419
	14	1 Katangi	Collection of metal and moorum for raising Tumsar-Katangi Road to Class I. Miles 27 to 33. From 15th October 1899. To 20th October 1900	9,954	17,604
			Totals and Averages for (ii) Roads raised in Class ...	1,37,077	3,67,307
			(iii) Reserve collection of Metal for Repairs and Renewals.		
	15	2 Kirnapur	Collection of metal for repairs on Gondia-Balaghat Road ... From 16th October 1899. To 7th October 1900.	14,380	50,321
	16	3 Waraseoni and 7 Lalbara.	Collection of metal and moorum on Rampaili-Waraseoni Road, 2nd Section. From 15th October 1899. To 13th October 1900.	7,802	15,570
			Totals and Averages for (iii) Reserve collection of Metal, &c.	22,382	65,891
			Totals and Averages for Road Works (i), (ii) and (iii) ...	2,88,217	7,36,475
BALAGHAT (WESTERN). SERGEANT J. H. ACHESON, Overseer. KIRNAPUR. MR. O. ST. J. DALY, Temporary Upper Subordinate.			IV.—Village Tanks.		
	17	1 Katangi, 2 Kirnapur and 3 Waraseoni.	Repairs to 7 Village Tanks. From 15th October 1899. To 20th October 1900.	3,470	4,521
			Totals and Averages for IV.—Village Tanks ...	3,470	4,521
			GRAND TOTALS AND AVERAGES FOR THE BALAGHAT DISTRICT.	4,55,583	10,28,939

DIX B.—(Contd.)

arranged by Districts and Civil Divisions.—(Contd.)

Total number of day-units relieved.	Number of day-units relieved per rupee of expenditure on works only.	Ratio of famine to ordinary rates.	Average wage-basis in seers per rupee.	Duration of work.	Probable amount required to complete at Public Works Department normal rates.	Remarks.
7	8	9	10	11	12	13
No.	No.	Ratio.	Seers.	Months.	Rs.	
3,148,754	...	...	...	...	...
1,215,894	12	3'00	11	12	...	Metal and moorum collected along road.
231,646	13	1'77	11	12	...	Metal collected along the road.
4,596,294	13	2'68	...	...	...
673,102	13	3'45	11	11½	...	Metal collected along the road.
204,019	13	2'00	11½	12	...	Metal and moorum collected and road repaired.
877,121	13	2'94	...	...	...
9,429,863	13	2'56	...	...	32,506	
57,811	13	13'0	11	12	...	All the tanks have been completed. The Deputy Commissioner remarks :— "Are all useful tanks."
57,811	13	13'0	...	...	...
13,253,182	13	2'26	10½	12	32,506	

Abstract statement of work done by Famine labour,

Sub-Division, and name of Sub-Division- al Officer.	Serial No.	Name and Index No. of Charge.	Name and class of work, and dates of commencement and closure of work.	Value of work done at normal Public Works Department rates.	Total expen- diture on Works,— wages, gra- tuitous and items of work done by con- tract.
1	2	3	4	5	6
HOSHANGABAD. Mr. C. E. LEFEUVRE, Sub-Engineer, from 23rd October 1899 to 25th November 1899. Mr. B. N. SARKAR, Assistant Engineer, from 26th November 1899 to closure.			NERBUDDA CIVIL DIVISION.		
			HOSHANGABAD DISTRICT.		
			<i>I.—Railways.</i>	Rs.	Rs.
	1	5 Nerbudda	... Improving the Indian Midland Railway from Nerbudda Bridge to Hoshangabad Railway Station. From 15th April 1900. To 29th August 1900.	12,000	25,459.
	2	6 Seoni	... Widening the Great Indian Peninsula Railway between Khandwa and Itarsi. From 26th February 1900. To 8th July 1900.	17,625	62,592.
			Totals and Averages for I.—Railways	29,625	88,051
			<i>III.—Road Works.</i>		
			(i) New Roads.		
	3	2 Sodulpur	... Constructing the Sodulpur-Rahatgaon-Magardha Road as Class II. Length 14 miles. From 30th October 1899. To 13th September 1900.	21,141	65,279
			Totals and Averages for (i) New Roads	21,141	65,279
HARDA. BABOO PANNA LALL, Overseer, from 14th October 1899 to 15th December 1899. Conductor W. J. TAYLOR, Supervisor, from 16th December 1899 to 24th March 1900. Mr. S. N. BHADURI, Temporary Engineer, from 25th March 1900 to 31st October 1900.			(ii) Roads raised in Class.		
	4	4 Piparia	... Raising Piparia-Sandia Road from Class II to Class I. Length 12 miles. From 27th October 1900 To 18th February 1899.	7,688	7,688
			Carried over	7,688	7,688
SINGANAMA-CHHIND- WARA ROAD. BABOO B. MADHIAO RAO, Sub-Overseer.					

DIX B,—(Contd.)

arranged by Districts and Civil Divisions.—(Contd.)

Total number of day-units relieved.	Number of day-units relieved per rupee of expenditure on works only.	Ratio of famine to ordinary rates.	Average wage-basis in seers per rupee.	Duration of work.	Probable amount required to complete at Public Works Department normal rates.	Remarks.
7	8	9	10	11	12	13
No. 351,670	No. 14	Ratio. 2'12	Seers. 10½	Months. 4½	Rs. ...	About 24 lakhs of cubic feet of earthwork have been done out of 80 lakhs estimated.
920,987	15	3'55	11	4½	...	26¼ lakhs of cubic feet of earthwork have been done on this Railway.
1,272,657	14	2'97	...	...	...
959,601	15	3'09	11	10½	2,000	Five miles have been completed. The Commissioner remarks:—"I think that this road should be completed between Sodalpur and Rahatgaon, as the cost will be only Rs. 2,000. But it is unnecessary to carry it further."
959,601	15	3'09	...	...	2,000	
...	...	1'00	...	3¾	72,000	Rubble collection was done by contract in the first 3 miles. No breaking was done as the camp was closed in February 1900. The Commissioner remarks:—"It is unnecessary to raise this road in class at present."
...	...	...	...	...	72,000	

Abstract statement of work done by Famine labour,

Sub-Division, and name of Sub-Divisional Officer.	Serial No.	Name and Index No. of Charge.	Name and class of work, and dates of commencement and closure of work.	Value of work done at normal Public Works Department rates.	Total expenditure on Works,—wages, gratuitous and items of work done by contract.
1	2	3	4	5	6
HARDA. BABOO PANNA LALL, Overseer, from 14th October 1899 to 15th December 1899. Conductor W. J. TAYLOR, Supervisor, from 16th December 1899 to 24th March 1900. Mr. S. N. BHADURI, Temporary Engineer, from 25th March 1900 to 31st October 1900.			NERBUDDA CIVIL DIVISION.—(Contd.) HOSHANGABAD DISTRICT.—(Contd.) III.—Road Works.—(Contd.) (ii) Roads raised in Class.—(Concld.)	Rs.	Rs.
	5	1 Chipabar	Raising the Khirkam-Charwa Road to Class I. Length 5½ miles. From 26th October 1899. To 1st September 1900.	7,688	7,683
	6	Do	Raising the Old Bombay Road from Mohal to Pokharni to Class II. Length 7½ miles. From 26th October 1899. To 1st September 1900.	42,261	66,156
	7	2 Sodalpur	Raising Timarni-Sodalpur Road from Class III B to Class II. Length 4 miles. From 30th October 1899. To 13th September 1900.	14,133	41,500
	8	7 Masangaon	Raising the Old Bombay Road from Harda to Mohal to Class II. Length 14½ miles. From 19th November 1899. To 12th September 1900.	9,037	25,481
			Totals and Averages for (ii) Roads raised in Class	24,380	62,968
				97,499	2,03,793
			(iii) Reserve Collection of Metal for Repairs and Renewals.		
	9	4 Piparia	Collection of a 9" reserve coat of metal on the Piparia-Pachmarhi Road. Length 32 miles. From 27th October 1899. To 18th February 1900.	21,804	30,972
			Carried over	21,804	30,972

SINGANAMA-CHHINDWARA ROAD.

BABOO B. MADHAO RAO,
Sub-Overseer.

DIX B.—(Contd.)

arranged by Districts and Civil Divisions.—(Contd.)

Total number of day-units relieved.	Number of day-units relieved per rupee of expenditure on works only.	Ratio of famine to ordinary rates	Average wage-basis in seers per rupee,	Duration of work.	Probable amount required to complete at Public Works Department normal rates	Remarks.
7	8	9	10	11	12	13
No.	No.	Ratio.	Seers.	Months.	Rs.	
...	...	...	...	...	72,000	
727,716	11	1 57	11	10¼	2,000	Completed as Class II road. Metal has also been collected to raise the road to Class I. The Commissioner remarks :—“ I think this road should be metalled as the cost will be comparatively slight, and it is important to open up the Charwa tract.”
456,500	11	2 94	11	10¼	4,000	Earthwork and moorum collection have been completed throughout. The Commissioner remarks —“ This work is not important enough to justify the expenditure of a lot of more money on it.”
634,448	25	2 82	11	10½	...	Road completed as Class II.
1,019,832	16	2 58	11½	9¼	..	Nothing has been done in the first 2 miles from Harda. In the remaining 12½ miles earthwork has been completed and moorum spread but not consolidated.
2,838,496	14	2 09	...	...	78,000	
161,315	5	1 42	...	3¼	...	168,447 cft. of metal was broken by famine labour. About 148,762 cft. of rubble is still lying at quarry and at roadside.
161,315	..	...	...	...	...

Abstract statement of work done by Famine labour,

Sub-Division and name of Sub-Divisional Officer.	Serial No.	Name and Index No. of Charge.	Name and class of work, and dates of commencement and closure of work.	Value of work done at normal Public Works Department rates.	Total expenditure on Works,—wages, gratuitous and items of work done by contract.
1	2	3	4	5	6
HOSHANGABAD. Mr. C. E. LaFauvre, Sub-Engineer, from 23rd October 1899 to 25th November 1899, Mr. B. N. SARKAR, Assistant Engineer, from 26th November 1899 to closure.			NERBUDDA CIVIL DIVISION.—(Contd.) HOSHANGABAD DISTRICT.—(Contd.) III.—Road Works.—(Concl'd.) (iii) Reserve Collection of Metal for Repairs and Renewals.—(Concl'd.)	Rs.	Rs.
			Brought forward ...	21,804	39,972
	10	3. Pathrota ...	Collection of reserve coat of metal on Hoshangabad-Itarsi Road. Length 10¼ miles. From 23rd October 1899. To 1st September 1900.	31,705	59,180
	11	Do. ...	Collection of reserve metal on Itarsi-Dhar Section of North-Western Road. Length 20 miles. From 23rd October 1899. To 1st September 1900.		
	12	8. Apgaon ...	Collection of reserve metal and moorum on the Harda-Handia Road. Length 13¼ miles. From 31st December 1899. To 28th September 1900.	24,081	77,188
			Totals and Averages for (iii) Reserve Collection of Metal for Repairs and Renewals.	77,590	1,67,340
			Totals and Averages for Road Works (i), (ii) and (iii) ...	1,96,230	4,36,412
			IV.—Village Tanks.		
	13	1. Chipabar, 3. Pathrota, 8. Apgaon.	Improving 4 Village Tanks From 23rd October 1899. To 28th September 1900.	17,999	50,108
			Totals and Averages for IV.—Village Tanks ...	17,999	50,108
			V.—Other Works—Miscellaneous.		
	14	5. Rasalpur ...	Kans eradication in fields along Hoshangabad-Itarsi Road ... From 24th October 1899. To 4th November 1900.	360	479
			Total, and Averages for V.—Other Works—Miscellaneous ...	360	479
			GRAND TOTALS AND AVERAGES FOR THE HOSHANGABAD DISTRICT	2,44,214	5,75,050

HARDA.
 BABOO PANNA LALL, Overseer from 14th October 1899 to 15th December 1899, Conductor W. J. TAYLOR, Supervisor, from 16th December 1899 to 24th March 1900. Mr. S. N. BHADURI, Temporary Engineer, from 25th March 1900 to 31st October 1900.

HOSHANGABAD.
 Mr. C. E. LaFauvre, Sub-Engineer, from 23rd October 1899 to 25th November 1899.
 Mr. B. N. SARKAR, Assistant Engineer, from 26th November 1899 to closure.

DIX B.—(Contd.)

arranged by Districts and Civil Divisions.—(Contd.)

Total number of day-units relieved.	Number of day-units relieved per rupee of expenditure on works only.	Ratio of famine to ordinary rates.	Average wage-basis in seers per rupee.	Duration of work.	Probable amount required to complete at Public Works Department normal rates.	Remarks.
7	8	9	10	11	12	13
No.	No.	Ratio.	Seers.	Months.	Rs.	
161,315	...	...	...	...	...
792,861	13	1'87	11	10½	...	3¼ lakhs of cft. of metal were broken and 1¼ lakhs of moorum collected.
1,00,708	13	3'21	11	9	...	4 lakhs of cft. of metal were broken and 2 lakhs of moorum collected.
1,957,884	12	2'16	...	...	...
5,755,981	13	2'22	...	...	80,000	
610,359	12	2'78	11	11	900	Work completed, with the exception of a little work in the waste weirs of the Chipabar and Apgaon tanks.
610,359	12	2'78	...	...	900	
3,833	8	1'33	9½	12¼	...	The camp was only kept open for 12 days, during which time 1¼ lakhs of earthwork was done.
3,833	8	1'33	...	...	...
7,642,830	13	2'35	11	12	80,900	

Sub-Division and name of Sub-Divisional Officer.	Serial No	Name and Index No. of Charge.	Name and class of work, and dates of commencement and closure of work.	Value of work done at normal Public Works Department rates.	Total expen- diture on Works,— wages, gra- tuitous, and items of work done by con- tract.
1	2	3	4	5	6
MULTAI. BABOO RALLA RAM, Sub-Overseer. SATNAIR. BABOO H. P. CHATTERJEE, Temporary Supervisor, from 5th February 1900 to 31st July 1900. Mr. D. McQuillen, Temporary Overseer, from 1st August 1900 to closure.			NERBUDDA CIVIL DIVISION.—(Contd.) BERUL DISTRICT. III.—Road Works. (i) New Roads.	Rs.	Rs.
MULTAI. BABOO RALLA RAM, Sub-Overseer. SATNAIR. BABOO H. P. CHATTERJEE, Temporary Supervisor, from 5th February 1900 to 31st July 1900. Mr. D. McQuillen, Temporary Overseer, from 1st August 1900 to closure.	1	2. Satnair, 11. Saw- almenda.	Constructing 3rd and 4th Sections of Badnur-Ellichpur Road from Jhallar 20th mile) to border as Class II. Length 28 miles. From 21st January 1900. To 29th September 1900.	34,274	75,517
MULTAI. BABOO RALLA RAM, Sub-Overseer. SATNAIR. BABOO H. P. CHATTERJEE, Temporary Supervisor, from 5th February 1900 to 31st July 1900. Mr. D. McQuillen, Temporary Overseer, from 1st August 1900 to closure.	2	1 Masod, 7. Atnair, 2. Satnair.	Constructing the Masod-Atnair-Satnair Road. Length 30 miles. From 22nd October 1899. To 4th August 1900.	64,529	94,765
MULTAI. BABOO RALLA RAM, Sub-Overseer. SATNAIR. BABOO H. P. CHATTERJEE, Temporary Supervisor, from 5th February 1900 to 31st July 1900. Mr. D. McQuillen, Temporary Overseer, from 1st August 1900 to closure.	3	1. Masod ...	Constructing Multai-Masod Road as Class I. Length 16 miles. From 22nd October 1899. To 1st September 1900.	68,259	1,08,098
MULTAI. BABOO RALLA RAM, Sub-Overseer. SATNAIR. BABOO H. P. CHATTERJEE, Temporary Supervisor, from 5th February 1900 to 31st July 1900. Mr. D. McQuillen, Temporary Overseer, from 1st August 1900 to closure.	4	6. Kolegaon, 7. At- nair.	Constructing the Badnur-Atnair Road. Length 21½ miles ... From 10th November 1899. To 29th September 1900.	78,808	1,66,203
			Carried over ...	2,45,870	4,44,583

DIX B.—(Contd.)

arranged by Districts and Civil Divisions.—(Contd.)

Total number of day-units relieved.	Number of day-units relieved per rupee of expenditure on works only.	Ratio of famine to ordinary rates.	Average wage-basis in seers per rupee.	Duration of work.	Probable amount required to complete at Public Works Department normal rates.	Remarks
7	8	9	10	11	12	13
No. 1,044,444	No. 14	Ratio. 2'20	Seers. 9¼	Months. 8¼	Rs 34,000	16 miles of the road from 29th to 45th mile have been completed as Class II. The Commissioner remarks :—" Next to the Badnur-Multai Road, this is in my opinion the most important. Considerable trade exists, as it is, between Ellichpur and Badnur."
1,187,919	13	1'47	9	9½	22,000	Earthwork and moorum collection have been completed for the whole length. The Commissioner remarks :—" A useful district road, but not of sufficient importance to warrant its completion just now."
1,286,392	12	1'58	9¼	10¼	37,500	Earthwork for the whole length and moorum collection and consolidation on 13 miles have been completed. Metal has also been collected on the first 6 miles. The Commissioner remarks :—" This road would be useful as a mere district road, but it is not nearly so important as certain other roads."
1,889,733	11	2'11	9	10¾	15,000	Earthwork and moorum collection and consolidation have been completed throughout. The Commissioner remarks :—" A useful road, but completion should be postponed in favour of others indicated."
5,408,488	...	...	...	...	1,08,500	

Abstract statement of work done by Famine labour,

Sub-Division and name of Sub-Divisional Officer.	Serial No.	Name and Index No. of Charge.	Name and class of work, and dates of commencement and closure of work.	Value of work done at normal Public Works Department rates.	Total expenditure on Works,—wages, gratuitous and items of work done by contract.
1	2	3	4	5	6
<p>SATNAIR.</p> <p>BABOO H. P. CHATTERJEE, Temporary Supervisor, from 5th February 1900 to 31st July 1900.</p> <p>MR. D. McQUILLÉN, Temporary Overseer, from 1st August 1900 to closure.</p>			NERBUDDA CIVIL DIVISION —(Contd.)		
			BETUL DISTRICT.—(Contd.)		
			III.—Road Works.—(Contd.)		
			(i) New Roads.—(Contd.)	Rs.	Rs.
			Brought forward ...	2,45,870	4,44,583
	5	2. Satnair ...	Constructing Chilkapur-Bhaisdehi Road. Length 6 miles ... From 21st January 1900. To 29th September 1900	12,543	39,175
			Totals and Averages for (i) New Roads ...	2,58,413	4,74,758
			(ii) Roads raised in Class.		
	6	3. Chichenda ...	Raising the North-West Road (Multai to Betul border) to Class I. Length 14½ miles. From 25th October 1899. To 20th September 1900.	58,665	1,00,626
	7	3 Chichenda, 4. Belmondai, 12. Tanwa.	Raising the North-West Road (Betul-Multai Section) to Class I. Length 25 miles. From 27th October 1899. To 22nd September 1900.	84,547	1,83,808
<p>MULTAI.</p> <p>BABOO RALLA RAO, Sub-Overseer.</p>	8	3 Chichenda, 8. Patan.	Raising Multai-Berar Frontier Road to Class I. Length 16½ miles. From 10th December 1899. To 25th August 1900.	43,562	95,936
	9	3. Chichenda ...	Raising Multai-Chhindwara Road to Class I. Length 22 miles. From 25th October 1899. To 20th September 1900.	5,794	13,533
			Totals and Averages for (ii) Roads raised in Class ...	1,92,571	3,93,903

DIX B.—(Contd.)

arranged by Districts and Civil Divisions.—(Contd.)

Total number of day-units relieved.	Number of day-units relieved per rupee of expenditure on works only.	Ratio of famine to ordinary rates.	Average wage-basis in seers per repee.	Duration of work.	Probable amount required to complete at Public Works Department normal rates.	Remarks.
7	8	9	10	11	12	13
No.	No.	Ratio.	Seers.	Months.	Rs.	
5,408,488	...	...	...	...	1,08,500	
484,110	16	2'40	9¼	8¼	3,000	Earthwork has been completed and moorum collected along roadside. The Commissioner remarks :—" A useful district road, but not of sufficient importance to warrant its completion just now."
5,892,598	12	1'84	...	..	1,11,500	
1,120,628	11	1'72	9½	11	14,000	Earthwork and moorum collection have been completed throughout and metal collected on the first 10 miles and consolidated on the first 6 miles. The Commissioner remarks :—" I think this road should be made if possible, for the probability is that the existence of a really good road between Nagpur and Multai would give an enormous stimulus to traffic between the two places."
2,241,408	12	2'17	9¼	11	17,000	Metal and moorum have been collected in nearly all miles, and consolidation done in 12½ miles. The Commissioner remarks :—" I am of opinion that in order of urgency this work should come first. It is most important that the head-quarters of the district should be connected with the only outlying Tahsil head-quarters by a good road."
1,167,949	12	2'20	9¼	8½	17,000	Metal and moorum have been collected along roadside and partly consolidated. The Commissioner remarks :—" This is an important road between Berar and Multai and should be completed when funds permit. Already there is considerable traffic along it."
165,722	12	2'34	9½	11	95,000	Metal and moorum have been collected and consolidated in the first two miles. The Commissioner remarks :—" This road would afford easy communication between Multai and Chhindwara, if completed. But I think it must wait."
4,695,707	12	2'05	...	...	1,43,000	

Abstract statement of work done by Famine labour,

Sub-Division and name of Sub-Divisional Officer.	Serial No.	Name and Index No. of Charge.	Name and class of work, and dates of commencement and closure of work.	Value of work done at normal Public Works Department rates.	Total expenditure on Works,—wages, gratuitous and items of work done by contract.
1	2	3	4	5	6
<p>BETUL.</p> <p>Mr. W. A. BOERNEL, Overseer.</p> <p>MULTAI.</p> <p>BABOO RALLA RAM, Sub-Overseer.</p> <p>SATNAIR.</p> <p>Mr. W. A. BOERNEL, Overseer, from 22nd October 1899 to 4th February 1900.</p> <p>BABOO H. P. CHATTERJEE, Temporary Supervisor, from 5th February 1900 to 31st July 1900.</p> <p>Mr. D. McQUILLAN, Temporary Overseer, from 1st August 1900 to closure.</p>			<p>NERBUDDA CIVIL DIVISION.—(Contd.)</p> <p>BETUL DISTRICT.—(Contd.)</p> <p>III.—Road Works.—(Concl'd.)</p> <p>(iii) Reserve Collection of Metal for Repairs and Renewals.</p>	Rs.	Rs.
	10	6. Kolegaon, 5. Nimpani, 13. Bhowra.	Collection of 9" reserve coat of metal on the Dhar-Betul Section of the North-West Road. Length 38 miles. From 26th October 1899 To 12th September 1900.	63,585	1,33,678
	11	6. Kolegaon ...	Collection of moorum for repairs on the Badnur-Ellichpur Road Length 20 miles. From 10th November 1899. To 29th September 1900.	2,432	3 249
	12	5. Nimpani, 10. Malajpur.	Repairs to the Nimpani-Chicholi Road Class III-A. Length 16 miles.	1,294	2,151
			Totals and Averages for (iii) Reserve Collection of Metal, &c.	67,511	1,37,078
			Totals and Averages for Road Works (i), (ii) and (iii) ...	5,18,495	10,07,739
			IV.—Village Tanks.		
	13	10. Malajpur, 4. Belmondai, 7. Atnair, 2. Satnair.	Improving and constructing 17 tanks	40 057	65,491
			Totals and Averages for IV—Village Tanks ...	40,087	65,491

DIX B.—(Contd.)

arranged by Districts and Civil Divisions.—(Contd.)

Total number of day-units relieved.	Number of day-units relieved per rupee of expenditure on works only.	Ratio of famine to ordinary rates.	Average wage-basis in seers per rupee.	Duration of work.	Probable amount required to complete at Public Works Department normal rates.	Remarks.
7	8	9	10	11	12	13
No.	No.	Ratio.	Seers.	Months.	Rs.	
2,013,632	15	2'10	9¾	10½	...	10 lakhs of cubic feet of metal and 8 lakhs of moorum have been collected and one lakh consolidated.
42,314	13	1'34	9½	10½	...	1¼ lakhs of cubic feet of moorum has been collected on the first 5 miles of the road.
26,349	12	1'44	9½	...	..	14 miles surface repairs and improvements to nallah crossings have been done.
2,082,295	15	2 06	...	...	...
12,670,600	13	1'94	...	...	2,54,500	
872,595	13	1'63	...	...	16,300	Work on all tanks, except Chandora and Samlapur, has been completed. To complete these two tanks would cost about Rs. 16,000. Rs. 300 more will be required for construction of waste-weirs for Mandir, Akalwadi and Nabhapur Tanks
872,595	13	1'63	...	...	16,300	

Abstract statement of work done by Famine labour,

Sub-Division, and name of Sub-Divisional Officer.	Serial No.	Name and Index No of Charge.	Name and class of work, and dates of commencement and closure of work.	Value of work done at normal Public Works Department rates.	Total expen- diture on Works,— wages, gra- tuitous and items of work done by con- tract.
1	2	3	4	5	6
MULTAI. BABOO RALLA RAM, Sub-Overseer.			NERBUDDA CIVIL DIVISION.—(Contd.) BETUL DISTRICT.—(Concl'd.) <i>V.—Other Works—Miscellaneous.</i>	Rs.	Rs.
	14	1 Masode ...	Agricultural improvements on Multai-Masode-Dhabka Road...	3,926	4,510
	15	Do. ...	Do. on Masode-Atnair Road ...	368	408
	16	4 Belmondri ...	Constructing a line of telegraph from Badnur to Multai. Length 28 miles.	486	998
			Totals and Averages for V.—Other Works—Miscellaneous...	4,780	5,916
			GRAND TOTALS AND AVERAGES FOR THE BETUL DISTRICT ...	5,63,362	10,79,146
			NIMAR DISTRICT. <i>I.—Railways.</i>		
	1	5 Kalimachak and 8 Tawa.	Widening the Great Indian Peninsula Railway ... From 6th November 1899. To 28th July 1900.	14,003	36,324
	2	10 Jaswari and 11 Manjrod.	Constructing Khandwa-Akola-Basim Railway, Jaiswari-Manjrod Section. From 11th April 1900. To 1st September 1900.	19,876	33,969
	3	11 Manjrod ...	Constructing four Inspection Bungalows on the Khandwa-Akola-Basim Railway. From April 1900. To May 1900.	2,836	2,907
KHANDWA. MR. W. J. McQUILLEN, Honorary Assistant Engineer, up to 31st March 1900. MR. D. McQUILLEN, Temporary Upper-Subordinate, from 1st April 1900.			Totals and Averages for I.—Railways ...	36,715	73,200
			<i>II-A.—Water-supply.</i>		
	4	3 Ajanti ...	Constructing Ajanti high-level feeder ... From 24th November 1899. To 5th May 1900.	16,234	27,989
	5	Do. ...	Constructing wells, &c., in the bed of the Mohgat Reservoir ..	539	539
			Totals and Averages for II-A.—Water-supply ...	16,773	28,528

DIX B.—(Contd.)

arranged by Districts and Civil Divisions.—(Contd.)

Total number of day-units relieved.	Number of day-units relieved per rupee of expenditure on works only.	Ratio of famine to ordinary rates.	Average wage-basis in seers per rupee.	Duration of work.	Probable amount required to complete at Public Works Department normal rates.	Remarks.
7	8	9	10	11	12	13
No.	No.	Ratio.	Seers.	Months.	Rs	
49,610	11	1'15	9¼	...	...
4,488	11	1'11	9¼	...	...
10,990	11	2'05	...	...	...
65,088	11	1'24	...	...	...
13,608,283	13	1'91	9½	12	2,70,800	
726,396	20	2'59	10½	8¼	...	19½ lakhs c.ft. of earthwork and 93,000 c.ft. ballast collection done.
512,163	15	1'71	9½	4¼	...	Earthwork and ballast collection done for a length of about 8 miles.
30,000	10	1'02	8	2	...	Four temporary bungalows have been built for the use of Inspecting Officers.
1,268,559	17	1'99	...	...	...
360,000	13	1'72	10½	5¼	...	A new high-level feeder canal has been made for the Khandwa Water-works, 5 miles long.
6,500	12	1'00	10½	...	...	Some wells were sunk in the bed of the reservoir and water was pumped from them into the main during the hot weather.
366,500	13	1'70	...	...	...

Abstract statement of work done by Famine labour,

Sub-Division, and name of Sub-Divisional Officer.	Serial No.	Name and Index No of Charge.	Name and class of work, and dates of commencement and closure of work.	Value of work done at normal Public Works Department rates.	Total expenditure on Works,—wages, gratuitous and items of work done by contract.
1	2	3	4	5	6
KHANDWA. Mr. W. J. McQUILLEN, Honorary Assistant Engineer, up to 31st March 1900 Mr. D. McQUILLEN, Temporary Upper Subordinate, from 1st April 1900.			NERBUDDA CIVIL DIVISION.—(Contd.) NIMAR DISTRICT.—(Contd) III.—Road Works. (i) New Roads.		
			Rs.	Rs.	
BURHANPUR. Mr. W. J. McQUILLEN, Honorary Assistant Engineer, up to 12th January 1900. Mr. L. S. ALLIN, Temporary Upper Subordinate, from 13th January 1900 to 20th March 1900. BABOO DOWLAT RAO, Sub-Overseer, from 21st March 1900.	6	4 Borda	... Constructing the Burhanpur-Shahapur Road as Class I. Length $5\frac{1}{2}$ miles. From 6th November 1899 To 28th September 1900.	20,509	52,612
	7	1 Asapu	... Constructing 1st and 2nd Sections of Harsud-Khandwa Road as Class II. Length 15 miles. From 22nd October 1899. To 6th July 1900.	44,896	88,949
	8	2 Borgaon	... Constructing Dongargaon-Boregaon Road as Class III-B. Length 3 miles. From 4th March 1900. To 19th May 1900.	3,427	7,487
Totals and Averages for (i) New Roads ...				68,832	1,49,048

DIX B.—(Contd.)

arranged by Districts and Civil Divisions.—(Contd.)

Total number of day-units relieved.	Number of day-units relieved per rupee of expenditure on works only.	Ratio of famine to ordinary rates.	Average wage-basis in seers per rupee.	Duration of work.	Probable amount required to complete at Public Works Department normal rates.	Remarks.
7	8	9	10	11	12	13
No.	No.	Ratio.	Seers.	Months.	Rs.	
799,000	15	2.57	10½	10¼	10,000	Earthwork and moorum consolidation completed, and metal collected along roadside. The Commissioner remarks :—" I think this road should be completed and maintained as a 1st Class road, if possible, as it is one of considerable importance."
1,266,968	14	1.98	10	8½	17,000	Earthwork and moorum collection practically completed from 2 miles south of Harsud Railway Station to the village of Jogilida, a distance of 15 miles. The Commissioner remarks :—" I think the completion of this road might be postponed till funds are superabundant."
104,220	14	2.18	11	2½	50	Nearly 3 miles long, Class III-B road, practically completed. The Commissioner remarks :—" A useful feeder road."
2,170,188	15	2.17	...	...	27,050	

Abstract statement of work done by Famine labour,

Sub-Division and name of Sub-Divisional Officer.	Serial No.	Name and Index No. of Charge.	Name and class of work, and dates of commencement and closure of work.	Value of work done at normal Public Works Department rates.	Total expenditure on Works,—wages, gratuitous and items of work done by contract.
1	2	3	4	5	6
HARSUD. Mr. W. J. McQUILLEN, Honorary Assistant Engineer, up to 16th December 1899. Corporal W. J. Brown, Overseer, from 16th December 1899.	9	5 Kalimachak ...	NERBUDDA CIVIL DIVISION.—(Contd.) NIMAR DISTRICT.—(Contd.) III.—Road Works.—(Contd.) (ii).—Road raised in Class. Raising Harsud Railway Feeder Road to Class I. Length $1\frac{1}{2}$ miles. From 6th November 1899. To 28th July 1900.	Rs. 2,852	Rs. 5,518
KHANDWA. Mr. W. J. McQUILLEN, Honorary Assistant Engineer, up to 31st March 1900 and from 19th May 1900 to closure. Mr. D. McQUILLEN, Temporary Upper Subordinate, from 1st April 1900 to 18th May 1900.	10	6 Mortakka ...	Raising Mortakka-Mandhata Road to Class I. Length 7 miles. From 21st January 1900. To 23rd June 1900.	9,542	10,778
KHAR. Mr. W. J. Brown, Overseer, from 16th December 1899. BURHANPUR. Mr. E. L. H. Temporary Upper Subordinate, from 13th January 1900 to 20th March 1900. Mr. A. B. Dowlat Ram, Sub-Overseer, from 21st March 1900.	11	2 Borgaon, 8 Tawa, 4 Borda, 6 Hatnair and 5 Kalimachak.	Raising the old Bombay Road to Class II From 6th November 1899. To 18th July 1900.	69,528	1,51,388
			Carried over ...	81,922	1,67,684

DIX B.—(Contd.)

arranged by Districts and Civil Divisions.—(Contd.)

Total number of day-units relieved.	Number of day-units relieved per rupee of expenditure on works only.	Ratio of famine to ordinary rates.	Average wage-basis in seers per rupee.	Duration of work.	Probable amount required to complete at Public Works Department normal rates	Remarks.
7	8	9	10	11	12	13
No.	No.	Ratio.	Seers.	Months.	Rs.	
76,150	14	1.93	10	9	...	The road has been metalled throughout. The Commissioner remarks:—"An important road which should be maintained."
161,730	15	1.13	10½	5	13,000	Earthwork completed and moorum collected and spread in miles 4 to 7. Metal also has been collected in miles 1 and 2. The Commissioner remarks:—"I think this road should be completed as there is considerable pilgrim traffic between Mortakka and Mandhata throughout the year."
2,376,391	16	2.18	10½	8½	54,000	Earthwork and moorum collection for a length of 35 miles have been completed. Metal also collected in certain lengths. The Commissioner remarks:—"I think this might be left until all the important roads are completed."
2,614,271	...	...	...	...	67,000	

Abstract statement of work done by Famine labour,

Sub-Division, and name of Sub-Divisional Officer.	Serial No.	Name and Index No of Charge.	Name and class of work, and dates of commencement and closure of work.	Value of work done at normal Public Works Department rates.	Total expenditure on Works,—wages, gratuitous and items of work done by contract.
1	2	3	4	5	6
KHANDWA. Mr. W. J. McQUILLEN, Honorary Assistant Engineer, up to 31st March 1900. Mr. D. McQUILLEN, Temporary Upper Subordinate, from 1st April 1900.			NERBUDDA CIVIL DIVISION.—(Contd.) NIMAR DISTRICT.—(Contd.) III.—Road Works.—(Concl'd.) (ii) Roads raised in Class.—(Concl'd.)	Rs.	Rs.
	12	3 Ajanti	Brought forward ... Raising the Khandwa-Mohgat Road to Class I ... From 11th February 1900. To 5th May 1900.	81,922 6,648	1,67,684 12,464
			Totals and Averages for (ii) Roads raised in Class ...	88,570	1,80,148
			(iii) Reserve collection of Metal for Repairs and Renewals.		
	13	3 Cheerakhadan	Collection of metal for the Khandwa Municipal Roads ... From 6th May 1900. To 28th September 1900.	2,697	6,627
	14	4 Borda	Collection of metal for the Burhanpur Railway Feeder Road .. From 6th November 1899. To 28th September 1900.	4,214	22,929
			Totals and Averages for (iii) Reserve collection of Metal, &c.	6,911	19,556
			Totals and Averages for (i), (ii) and (iii) Road works ...	1,64,313	3,48,752
BURHANPUR. Mr. W. J. McQUILLEN, Honorary Assistant Engineer, up to 12th January 1900. Mr. L. S. ALLIN, Temporary Upper Subordinate, from 13th January 1900 to 20th March 1900. BABOO DOWLAT RAM, Sub-Overseer, from 21st March 1900.					

DIX B.—(Contd.)

arranged by Districts and Civil Divisions.—(Contd.)

Total number of day-units relieved.	Number of day-units relieved per rupee of expenditure on works only.	Ratio of famine to ordinary rates.	Average wage-basis in seers per rupee.	Duration of work.	Probable amount required to complete at Public Works Department normal rates.	Remarks.
7	8	9	10	11	12	13
No.	No.	Ratio.	Seers.	Months.	Rs.	
2,614,271	...	...	...	...	67,000	
150,000	12	1'87	11	2¾	...	1¼ lakhs cft. of metal and 47,000 cft. of moorum have been collected. The Commissioner remarks:—"This road is important, and should be metalled, if possible."
2,764,271	15	2 03	...	...	67,000	
155,412	23	2 46	11	4¾	...	50,000 cft. of metal and 13,000 cft. of moorum have been collected and made over to Municipality. The Commissioner remarks:—"This is a matter for the Khandwa Municipal Committee."
236,645	18	3'07	10½	10¾	...	1¼ lakhs of cft. of metal have been broken at quarries. The Commissioner remarks:—"A finished road which would of course be maintained, being of much importance."
392,057	20	2 83	...	...	...
5,326,516	15	2'12	...	...	94,050	

Abstract statement of work done by Famine labour,

Sub-Division and name of Sub-Divisional Officer.	Serial No.	Name and Index No. of Charge.	Name and class of work, and dates of commencement and closure of work.	Value of work done at normal Public Works Department rates.	Total expenditure on Works,—wages, gratuitous and items of work done by contract.
1	2	3	4	5	6
NIMAR. Mr. W. J. McQUILLEN, Honorary Assistant Engineer.	15	11 Manjrod	NERBUDDA CIVIL DIVISION.—(Contd.) NIMAR DISTRICT.—(Concl'd.) V.—Other Works—Miscellaneous.	Rs.	Rs.
			Constructing a grain godown at Manjrod	3,650	3,654
			From May 1900.		
			To June 1900.		
			Totals and Averages for V—Other Works—Miscellaneous.	3,650	3,654
			GRAND TOTALS AND AVERAGES FOR THE NIMAR DISTRICT ...	2,21,451	4,54,134
			NARSINGHPUR DISTRICT. III.—Road Works. (ii) Roads raised in Class.		
			Raising III-B portion of Narsinghpur-Lakhnadon Road to Class I. Length 12 miles.	3,677	6,165
			From 21st November 1899.		
			To 24th February 1900.		
			Totals and Averages for (ii) Roads raised in Class ...	3,677	6,165
			V.—Other Works—Miscellaneous.		
			Eradication of <i>kans</i> from land within limits of Babai village.	8,198	7,244
			From 1st December 1899.		
			To 24th February 1900.		
NARSINGHPUR. Mr. A. W. WEBB, Overseer.	2	2 Babai	Totals and Averages for V.—Other Works—Miscellaneous ..	8,198	7,244
			GRAND TOTALS AND AVERAGES FOR THE NARSINGHPUR DISTRICT.	11,875	13,409
			CHHINDWARA DISTRICT. I.—Railways.		
			Constructing Seoni-Chhindwara branch line of the Satpura Railway.	37,579	68,208
			From 27th December 1899.		
			To 29th September 1900.		
			Totals and Averages for I—Railways ...	37,579	68,208
CHHINDWARA. SERGEANT J. DESMOND, Supervisor.	1	7 Markhandi, Chaurai, and Sonakhar.	NERBUDDA CIVIL DIVISION.—(Contd.) NIMAR DISTRICT.—(Concl'd.) V.—Other Works—Miscellaneous.	Rs.	Rs.
			Constructing a grain godown at Manjrod	3,650	3,654
			From May 1900.		
			To June 1900.		
			Totals and Averages for V—Other Works—Miscellaneous.	3,650	3,654
			GRAND TOTALS AND AVERAGES FOR THE NIMAR DISTRICT ...	2,21,451	4,54,134
			NARSINGHPUR DISTRICT. III.—Road Works. (ii) Roads raised in Class.		
			Raising III-B portion of Narsinghpur-Lakhnadon Road to Class I. Length 12 miles.	3,677	6,165
			From 21st November 1899.		
			To 24th February 1900.		
			Totals and Averages for (ii) Roads raised in Class ...	3,677	6,165
			V.—Other Works—Miscellaneous.		
			Eradication of <i>kans</i> from land within limits of Babai village.	8,198	7,244
			From 1st December 1899.		
			To 24th February 1900.		

DIX B.—(Contd.)

arranged by Districts and Civil Divisions.—(Contd.)

Total number of day-units relieved.	Number of day-units relieved per rupee of expenditure on works only.	Ratio of famine to ordinary rates.	Average wage-basis in seers per rupee.	Duration of work.	Probable amount required to complete at Public Works Department normal rates.	Remarks.
7	8	9	10	11	12	13
No.	No.	Ratio.	Seers.	Months.	Rs.	
33,292	9	1'00	8	2	...	Nearly all grain had to be imported to Manjrod, and a large grain shed with corrugated iron roof was built for storing this during the rains. The Commissioner remarks :—" As the Manjrod tract is being newly colonized, it is probable that this building can be utilized for some public purpose hereafter."
33,292	9	1'00	...	...	...
6,994,867	15	2'05	10	12	94,050	
53,797	9	1'68	12	3	1,400	Metal has been broken along the road for 3 miles. The Commissioner remarks :—" It should be completed if funds permit."
53,797	9	1'68	...	...	1,400	
105,407	15	0'88	12	3	...	
105,407	15	0'88	...	...	...
159,204	12	1'13	12	3	1,400	
956,041	14	1'82	11¾	9	...	Fifteen miles of earthwork completed and 10 miles partly done.
956,041	14	1'82	...	...	...

Abstract statement of work done by Famine labour,

Sub-Division, and name of Sub-Divisional Officer.	Serial No.	Name and Index No. of Charge.	Name and class of work, and dates of commencement and closure of work.	Value of work done at normal Public Works Department rates.	Total expen- diture on Works,— wages, gra- tuitous and items of work done by con- tract.
1	2	3	4	5	6
CHHINDWARA. SERGEANT J. DESMOND, Supervisor.			NERBUDDA CIVIL DIVISION.—(Contd.) CHHINDWARA DISTRICT.—(Contd.) III.—Road Works. (i) New Roads.	Rs.	Rs.
	2	2 Saoli	Constructing 3rd and 4th Sections of Betul-Chhindwara Road from Saoli to Junapani as Class I. Length 11 miles. From 25th October 1899. To 30th September 1900.	50,707	62,463
	3	4 Panjra	Constructing Chand-Chaurai-Kumarpani Road as, Class II. Length 15 miles. From 5th December 1889. To 17th July 1900.	55,960	78,287
	4	11 Deogarh	Constructing Deogarh-Palaspani Road From 21st March 1900. To 17th July 1900.	2,158	3,257
	5	8 Khapa and Hurrai.	Constructing 3rd Section of Narsinghpur-Chhindwara Road, miles 33 to 60, as Class I. From 17th December 1899. To 30th September 1900.	1,32,327	1,79,472
HURRAI. BABOO RAM LAKHAN LAL, Sub-Overseer.			Totals and Averages for (i) New Roads	2,41,152	3,23,479
			(ii) Roads raised in Class.		
	6	1 Amarwara and 8 Khappa.	Collection of metal and moorum for metalling 4th Section of Narsinghpur-Chhindwara Road (Singori to Khappa). Length 23 miles. From 27th October 1899. To 6th September 1900.	23,197	37,020
CHHINDWARA. SERGEANT J. DESMOND, Supervisor.	7	3 Oomra Nallah and 6 Ramakona.	Collection and consolidation of metal and moorum on miles 32 to 78 of the Saoner-Chhindwara Road. From 19th November 1899. To 6th September 1900.	91,530	1,50,387
			Carried over	1,14,727	1,87,407

DIX B.—(Contd.)

arranged by Districts and Civil Divisions.—(Contd.)

Total number of day-units relieved.	Number of day-units relieved per rupee of expenditure on works only.	Ratio of famine to ordinary rates.	Average wage-basis in seers per rupee.	Duration of work.	Probable amount required to complete at Public Works Department normal rates.	Remarks.
7	8	9	10	11	12	13
No.	No.	Ratio.	Seers.	Months.	Rs.	
812,018	13	1'23	11 $\frac{1}{4}$	11	12,000	The earthwork of 7 $\frac{1}{4}$ miles out of 11 miles completed. Metal and moorum also provided.
						The Commissioner remarks:—"As I have said with regard to the portion of this road which lies in the Betul District, a really good road would form an easy and valuable means of communication between Chhindwara and Multai, but there are other roads on which it is more important to spend money."
1,032,682	13	1'40	11	7 $\frac{1}{2}$	5,000	Fifteen miles of earthwork done.
						The Commissioner remarks:—"This road would probably open up Khamarpani forests. But probably money could be better spent first on other roads."
45,382	14	1'51	12 $\frac{1}{2}$	4	...	Six miles of road have been constructed.
2,153,775	12	1'36	11 $\frac{1}{3}$	9 $\frac{1}{2}$	18,600	Earthwork nearly completed, and metal and moorum have been collected.
						The Commissioner remarks:—"This is another important road and should, I think, be completed."
4,043,857	13	1'34	...	...	35,600	
470,778	13	1'60	10 $\frac{1}{4}$	10 $\frac{1}{4}$	...	Metal and moorum have been collected for a length of about 17 miles.
						The Commissioner remarks:—"This is another important road, and should, I think, be completed."
1,876,096	12'5	1'64	11 $\frac{1}{2}$	9 $\frac{1}{4}$	12,475	Metal for a length of 35 miles has been collected.
						The Commissioner remarks:—"This road should certainly be completed. It is a very important one."
2,346,874	...	...	...	...	12,475	

Abstract statement of work done by Famine labour,

Sub-Division and name of Sub-Divisional Officer.	Serial No	Name and Index No. of Charge.	Name and class of work, and dates of commencement and closure of work.	Value of work done at normal Public Works Department rates.	Total expenditure on Works,—wages, gratuitous and items of work done by contract.
1	2	3	4	5	6
CHHINDWARA. SERGEANT J. DESMOND, Supervisor.			NERBUDDA CIVIL DIVISION.—(Concl'd.) CHHINDWARA DISTRICT.—(Concl'd.) III.—Road Works.—(Concl'd.) (ii) Roads raised in Class.—(Concl'd.) Brought forward ...	Rs.	Rs.
	8	2 Saoli	... Collection of metal and moorum for metalling 5th Section of Betul-Chhindwara Road, miles 41 to 51. From 28th October 1899. To 30th September 1900.	1,14,727 28,094	1,87,407 35,136
	9	10 Pandhurna	... Collection of metal and moorum for metalling North-West Road (Saoner to Multai). Length 25 miles. From 5th February 1900. To 3rd July 1900.	23,768	28,896
			Totals and Averages for (ii) Roads raised in Class ..	1,66,589	2 51,439
			(iii) Reserve Collection of Metal for Repairs and Renewals.		
	10	7 Markhandi, 9 Chaurai, and 12 Sonakhar.	Collection of metal for renewals on the Seoni-Chhindwara Road, miles 12 to 42. From 27th December 1899. To 29th September 1900.	32,231	49,086
			Totals and Averages for (iii) Reserve Collection of Metal, &c.	32,231	49,086
			Totals and Averages for Road Works (i), (ii) and (iii).	4,39,972	6,24,004
			IV.—Village Tanks.		
	11	1 Amarwara, 8 Khappa, 5 Hurrai, 2 Saoli, 3 Omra Nallah, 4 Panjra, 7 Markhandi, and 9 Chaurai.	Constructing 53 tanks From 25th October 1899 To 30th September 1900	1,13,125	1,23,581
			GRAND TOTALS AND AVERAGES FOR THE CHHINDWARA DISTRICT.	5,90,676	8,15,793

HURRAI.
BAROO RAM LAKHAY LAL, Sub-Overseer.
CHHINDWARA.
SERGEANT J. DESMOND, Supervisor.

DIX B.—(Contd.)

arranged by Districts and Civil Divisions.—(Contd.)

Total number of day-units relieved.	Number of day-units relieved per rupee of expenditure on works only.	Ratio of famine to ordinary rates.	Average wage-basis in seers per rupee.	Duration of work.	Probable amount required to complete at Public Works Department normal rates	Remarks.
7	8	9	10	11	12	13
No.	No.	Ratio.	Seers.	Months.	Rs.	
2 346,874	...	...	...	...	12,475	
475,289	14	1'25	11¼	11¼	...	Metal has been collected on a length of about 10 miles.
424,999	15	1'22	12½	5	8,800	Metal collected on nearly the whole length in Chhindwara District. The Commissioner remarks:—"This road should be completed when funds permit, as it would stimulate traffic between Nagpur and Pandhurna and Multai. But there are other roads more important."
3,247,162	13	1'51	...	...	21,275	
638,118	13	1'52	11½	9	...	15 miles of metal collection has been done.
638,118	13	1'52	11½	9	...	
7,929,137	13	1'42	...	...	56,875	
1,717,443	14	1'09	11¾	11	...	The Commissioner remarks:—"I have already forwarded a report by the Deputy Commissioner on some of these tanks. I have no personal knowledge of most of them and have nothing to add to what I have already said."
10,602,621	13	1'38	11	12	56,875	

Abstract statement of work done by Famine labour,

Sub-Division, and name of Sub-Division- al Officer.	Serial No.	Name and Index No of Charge.	Name and class of work, and dates of commencement and closure of work.	Value of work done at normal Public Works Department rates.	Total expen- diture on Works,— wages, gra- tuitous and items of work done by con- tract.
1	2	3	4	5	6
RAIPUR. Mr. H. B. LEAROV, Assistant Engineer. " C. H. DRACOTT, Temporary Engineer.	1	21 Head-Quarter Charge, Raipur, 26 Hasaud, 2 Nowagaon, 60 Arang, 4 Gorari, 20 Karti and 45 Suarmar.	CHHATTISGARH CIVIL DIVISION. RAIPUR DISTRICT. I.—Railways. Constructing Vizianagram-Raipur Railway From 25th April 1900. To 29th September 1900.	...	Rs. 21,150 Rs. 62,520
		
		
		
DHAMTARI AND RAJIM. Mr. E. SMITH, Temporary Upper Subordinate. SUB-CONDUCTOR H. NAYLON, Supervisor. BABOO V. B. DAREY, Temporary Upper Subordinate. Mr. C. WILLFORD, Supervisor. Mr. C. H. DRACOTT, Temporary Engineer.	2	15 Kurud	Improvements to Raipur-Dhamtari Feeder Line From 10th January 1900. To 6th September 1900.	...	Rs. 8,759 Rs. 18,557
RAIPUR. Mr. H. B. LEAROV, Assistant Engineer. " C. H. DRACOTT, Temporary Engineer.	3	58 Silyari	Ballast collection for the Bengal-Nagpur Railway From 10th May 1900. To 26th September 1900.	...	Rs. 3,691 Rs. 13,340
			Totals and Averages for I.—Railways	...	Rs. 33,600 Rs. 94,417

DIX B.—(Contd.)

arranged by Districts and Civil Divisions.—(Contd.)

Total number of day-units relieved.	Number of day-units relieved per rupee of expenditure on works only.	Ratio of famine to ordinary rates.	Average wage-basis in seers per rupee.	Duration of work.	Probable amount required to complete at Public Works Department normal rates.	Remarks.
7	8	9	10	11	12	13
No.	No.	Ratio.	Seers.	Months.	Rs.	
800,602	13	2.96	12	5	...	Earthwork along such portions of the line as could conveniently be worked from Public Works Department camps has been done; also a certain amount of boulder collection and ballast breaking. The Commissioner remarks:—"It is certainly a work to be completed whenever funds may permit. Will be most useful."
221,720	12	2.12	12½	8	...	Earthwork and moorum collection along the line have been done; a small quantity of metal also has been collected.
167,430	13	3.61	12½	4½	...	94,349 cft. ballast broken and handed over to Railway.
1,189,752	13	2.81	...	...	...

Abstract statement of work done by Famine labour,

Sub-Division, and name of Sub-Division- al Officer.	Serial No.	Name and Index No. of Charge.	Name and class of work, and dates of commencement and closure of work.	Value of work done at normal Public Works Department rates.	Total expen- diture on Works,— wages, gra- tuitous and items of work done by con- tract.
1	2	3	4	5	6
DRUG. MR. P. C. LALL, Assistant Engineer.	4	50 Maroda (East), 51 Maroda (West) and 6 Drug.	CHHATTISGARH CIVIL DIVISION.—(Contd.) RAIPUR DISTRICT.—(Contd.) II.—Irrigation Works. Constructing Maroda Irrigation Tank ... From 25th March 1900. To 15th October 1900.	Rs. 87,154	Rs. 1,08,955
	5	36 Sanjari and 56 Sanjari (East).	Constructing Sanjari Irrigating Tank ... From 5th February 1900. To 19th October 1900.	82,578	1,51,616
	6	Do.	Constructing Soorli Irrigation Tank ... From 1st April 1900. To 19th October 1900.	13,645	25,084
	7	40 Aranda	Constructing Khupra Irrigation Tank ... From 1st April 1900 To 31st August 1900.	11,357	13,410
DRUG. BABOO K. H. DATRY, Temporary Upper Subordinate. MR. P. C. LALL, Assistant Engineer.	8	48 Khupri and 40 Aranda.	Constructing Khupri Irrigation Tank ... From 1st March 1900 To 30th June 1900.	13,894	29,795
Carried over ...				2,08,628	3,28,860

DIX B.—(Contd.)

arranged by Districts and Civil Divisions.—(Contd.)

Total number of day-units relieved.	Number of day-units relieved per rupee of expenditure on works only.	Ratio of famine to ordinary rates.	Average wage-basis in seers per rupee.	Duration of work.	Probable amount required to complete at Public Works Department normal rates.	Remarks.
7	8	9	10	11	12	13
No.	No.	Ratio.	Seers.	Months.	Rs.	
1,601,401	15	1.25	12	7	1,18,373	Certain amount of earthwork and stone-pitching have been done.
1,814,592	12	1.84	12½	8½	58,760	More than half the work carried out. The Commissioner remarks—"I believe this to be an excellent scheme, but I am not personally acquainted with the details. I have no doubt that its completion would be most useful from the point of view of protection against famine though probably not directly remunerative."
301,008	12	1.84	11½	6½	10,530	The earthwork of the bund has been nearly completed.
202,740	15	1.18	12½	5	29,817	The whole length of bund has been raised to an average height of about 6 feet.
417,130	14	2.14	12½	4	2,21,814	About ⅓rd of the main supply tank bund has been constructed and a portion of the escape cut.
4,336,871	...	...	...	...	439,324	

Abstract statement of work done by Famine labour,

Sub-Division, and name of Sub-Divisional Officer.	Serial No.	Name and Index No. of Charge.	Name and class of work, and dates of commencement and closure of work.	Value of work done at normal Public Works Department rates.	Total expenditure on Works,—wages, gratuitous and items of work done by contract.
1	2	3	4	5	6
DRUG. MR. P. C. LALL, Assistant Engineer. BALODA. MR. A. O'BRIEN, Temporary Engineer. MR. G. C. PARKAR, Temporary Engineer.			CHHATTISGARH CIVIL DIVISION,—(Contd.) RAIPUR DISTRICT,—(Contd.) II.—Irrigation Works.—(Concl'd.)	Rs.	Rs.
			Brought forward ..	2,08,628	3 23,860
	9	40 Aranda ...	Constructing Aranda Irrigation Tank ... From 1st April 1900. To 10th September 1900.	6,779	9,860
	10	41 Kasdol (Hatod) .	Constructing Hatod (Asnidh) Irrigation Tank ... From 6th February 1900. To 14th July 1900	14 932	60,158
DRUG. MR. P. C. LALL, Assistant Engineer.	11	17 Gunderdehi ...	Constructing Gunderdehi Irrigation Tank ... From 1st April 1900. To 11th July 1900.	8,067	12,000
			Totals and Averages for II.—Irrigation Works .	2,38,406	4,10,878
DRUG. MR. C. J. HOPSON, Temporary Upper Subordinate. BASOO K. H. DAREY, Do. MR. P. C. LALL, Assistant Engineer.			III.—Road Works.		
			(i) New Roads.		
	12	36 Sanjari, 7 Deori 56 Sanjari (East), 62 Lohara and 12 Kussumkassa	Completing 1st Section, and constructing 2nd and 3rd Sections of Raj Nandgaon-Antagarh Road, as Class II, Length 38 miles. From 11th November 1899. To 19th October 1900.	1,06 807	2,65,560
			Carried over ...	1,06,807	2,65,560

DIX B.—(Contd.)

arranged by Districts and Civil Divisions.—(Contd.)

Total number of day-units relieved.	Number of day-units relieved per rupee of expenditure on works only.	Ratio of famine to ordinary rates.	Average wage basis in seers per rupee.	Duration of work.	Probable amount required to complete at Public Works Department normal rates.	Remarks.
7	8	9	10	11	12	13
No.	No.	Ratio.	Seers.	Months.	Rs.	
4,336,871	...	...	...	...	439,324	
138,040	14	1'45	12½	5½	3,090	The tank bund is practically complete with the exception of stone pitching and masonry sluices. The Commissioner remarks: " This appears to be worth completing."
830,510	14	4'03	11½	5½	65,980	Some quantity of earthwork, rock blasting and collection of boulders for pitching purposes have been done.
168,000	14	1'49	10	3½	3,404	About ¼th portion of work is completed.
5,473,421	13	1'72	...	...	5,11,798	
3,370,303	13	2'49	11	11¼	59,529	The whole length practically completed as Class II, except culverts and causeways. Metal and rubble also collected along the first 20 miles of the road.
3,370,303	...	...	...	...	59,529	

Abstract statement of work done by Famine labour,

Sub-Division and name of Sub-Divisional Officer.	Serial No	Name and Index No. of Charge.	Name and class of work, and dates of commencement and closure of work.	Value of work done at normal Public Works Department rates.	Total expenditure on Works,—wages, gratuitous and items of work done by contract.
1	2	3	4	5	6
RAJIM. SUB-CONDUCTOR H. NAYLON, Supervisor. Mr. C. WILFORD, do. BABOO V. B. DATEY, Temporary Upper Subordinate. Mr. C. H. DRACOTT, Temporary Engineer.			CHHATTISGARH CIVIL DIVISION.—(Contd.) RAIPUR DISTRICT.—(Contd.) III.—Road Works.—(Contd.) (i) New Roads —(Contd.)	Rs.	Rs.
			Brought forward ...	1,06,807	2,65,560
	13	9 Rajim and 42 Kopra.	Constructing Rajim-Deobhag Road, Khalsa Section, as Class II. Length 19 miles. From 3rd November 1899. To 11th August 1900.	37,589	1,56,859
	14	19 Kumhari and 55 Ahwra.	Completing Kumhari-Patharia Road as Class II. Length 15 miles. From 13th January 1900. To 30th June 1900.	7,547	27,092
	15	5 Dhamda ...	Completing Dhamda-Gandai Road as Class II. Length 22 miles. From February 1900. To June 1900.	23,631	66,423
GANDAI. Mr. R. H. CUMMING, Temporary Engineer.	16	17 Gunderdehi ...	Constructing Gunderdehi-Arjunda Section of Raj-Nandgaon Gunderdehi Road as Class II. Length 6 miles. From 1st April 1900. To 11th July 1900.	13,414	28,000
	17	49 Balod and 62 Lohara.	Constructing Balod-Lohara Road as Class II. Length 10½ miles. From 28th March 1900. To 17th July 1900.	13,580	39,987
DRUG. Upper Subordinate. Mr. C. J. HOBSON, Temporary do. BABOO K. H. DATEY, do. Mr. P. C. LALL, Assistant Engineer.			Carried over ...	2,02,568	5,74,021

DIX B.—(Contd.)

arranged by Districts and Civil Divisions.—(Contd.)

Total number of day-units relieved.	Number of day-units relieved per rupee of expenditure on works only.	Ratio of famine to ordinary rates.	Average wage-basis in seers per rupee.	Duration of work.	Probable amount required to complete at Public Works Department normal rates.	Remarks.
7	8	9	10	11	12	13
No.	No.	Ratio.	Seers.	Months.	Rs.	
3,370,303	...	...	...	...	59,529	
2,302,930	15	4'17	11½	9¼	2,399	The road practically completed as Class II except the erection of mile and boundary stones. The Commissioner remarks:—"This is a most useful road being the link to connect the lengths already constructed from the private funds of the Bindra-Nawagarh Estate with the Railway at Rajim. It should be completed at once."
330,970	12	3'59	12½	5½	18,400	Earthwork on the 2nd Section, miles 6 to 15, has been done, and moorum collected in the first 5 miles.
931,539	14	2'81	11	5	21,415	34½ lakhs of cubic feet of earthwork done and about ¾ds of moorum required collected and consolidated.
392,000	14	2'09	10	3½	7,144	The road practically completed as Class II, except earthwork in cutting approaches to nallahs and 2 miles of moorum soling and culverts and causeways. The Commissioner remarks:—"Distinctly useful little link, bringing Gunderdehi into direct communication with Raj-Nandgaon. It should certainly be completed."
404,096	13	2'22	10½	3½	4,500	The road practically completed as Class II with the exception of earthwork in cutting approaches to nallahs and the construction of causeways and culverts. The Commissioner remarks:—"A useful work which will place the important centre of Balod in direct communication <i>via</i> the Raj-Nandgaon-Antagarh Road with Raj-Nandgaon. This is the course chiefly taken by traffic at present. It should be finished as economically as possible."
7,731,838	...	...	...	...	113,387	

Abstract statement of work done by Famine labour,

Sub-Division, and name of Sub-Divisional Officer.	Serial No.	Name and Index No. of Charge.	Name and class of work, and dates of commencement and closure of work.	Value of work done at normal Public Works Department rates.	Total expenditure on Works,—wages, gratuitous and items of work done by contract.
1	2	3	4	5	6
BALODA. Mr. A. O'BAUGH, Temporary Engineer. Mr. R. H. CUNNING, Temporary Engineer. GANDAL. Mr. R. H. CUNNING, Temporary Engineer.			CHHATTISGARH CIVIL DIVISION.—(Contd.)		
			RAIPUR DISTRICT.—(Contd.)		
			III—Road Works.—(Contd.)		
			(i) New Roads.—(Contd.)	Rs.	Rs.
			Brought forward ...	2,02,568	5,74,021
	18	5 Dhamda and 33 Deokar.	Constructing Raj-Nandgaon-Deokar Road, Khalsa Section, as Class II. Length 16½ miles. From 15th May 1900. To 30th August 1900.	12,873	31,673
	19	52 Deorbija ...	Constructing Deorbija-Khamaria Road, Khalsa Section, as Class II. Length 3 miles. From 1st May 1900. To 30th June 1900.	3,524	7,507
	20	34 Bemetera (East).	Constructing Kharsara-Khamaria Link Road, as Class II. Length 2 miles. From 15th June 1900. To 31st July 1900.	448	1,024
	21	22 Loan ...	Constructing Loan-Katangi Road, as Class I. Length 10 miles From 15th April 1900. To 9th June 1900.	1,067	3,425
	22	43 Mahadeoghat ...	Constructing Mahadeoghat Link Road, Raipur as Class I. Length 1½ miles. From 11th March 1900. To 30th June 1900.	5,486	23,757
ARANG. Mr. H. B. LEAROD, Assistant Engineer. Mr. C. H. DRACOTT, Temporary Engineer.	23	21 Head-quarter charge, Raipur.	Constructing Chord Road from Club to Polo ground, Raipur, as Class II. Length 1 mile. From 1st May 1900. To 4th August 1900.	4,471	13,005
			Carried over ...	2,30,437	6,54,412

Abstract statement of work done by Famine labour,

Sub-Division, and name of Sub-Divisional Officer.	Serial No	Name and Index No. of Charge.	Name and class of work, and dates of commencement and closure of work.	Value of work done at normal Public Works Department rates.	Total expenditure on Works,—wages, gratuitous and items of work done by contract.
1	2	3	4	5	6
DHAMTARI Mr. E. SMITH, Temporary Upper Subordinate.			CHHATTISGARH CIVIL DIVISION.—(Contd.) RAIPUR DISTRICT.—(Contd.) III.—Road Works.—(Contd) (i) New Roads.—(Concl'd)	Rs.	Rs.
			Brought forward ...	2,30,437	6,54,412
	24	27 Dhamtari (Khas)	Constructing Dhamtari-Sohawa Road as Class II. Length 32 miles. From 28th March 1900. To 4th August 1900.	16,609	39,522
RAJIM. Baboo V. B. DAREY, Temporary Upper Subordinate.	25	54 Kaneri ...	Constructing Chituoed-Balod Road as Class II. Length 19 miles. From 25th February 1900. To 4th August 1900.	13,897	53,100
	26	52 Deorbija ...	Constructing Rajim-Fingeshwar Road as Class II. Length 11 miles. From 7th May 1900. To 20th July 1900.	6,455	26,573
DRUG. Mr. C. J. HORSOX, Temporary Upper Subordinate. Baboo K. H. DAREY, do. Mr. P. C. LALL, Assistant Engineer.	27	6 Drug ...	Constructing Drug-Utai Road as Class II. Length 6 miles From 1st February 1900. To 31st March 1900.	5,147	7,000
			Totals and Averages for (i) New Roads ..	2,72,545	7,80,607

DIX B.—(Contd.)

arranged by Districts and Civil Divisions.—(Contd.)

Total number of day-units relieved.	Number of day-units relieved per rupee of expenditure on works only.	Ratio of famine to ordinary rates.	Average wage-basis in seers per rupee.	Duration of work.	Probable amount required to complete at Public Works Department normal rates.	Remarks.
7	8	9	10	11	12	13
No.	No.	Ratio.	Seers.	Months.	Rs.	
8,825,204	...	...	..	...	2,07,329	
500,004	15	2.38	10½	4¼	60,000	The first 8 miles completed as a Class II Road. The Commissioner remarks :—"Remarks as for Loan-Katangi Road, except that I would give this a higher place in the Road Scheme."
659,799	12	3.83	10½	5½	20,000	The last 9 miles into Chitoud were taken up and completed as a Class II Road.
360,599	14	4.12	10½	2½	17,731	Over ¾th of earthwork completed and about ¼th of the moorum required collected in some miles. The Commissioner remarks :—"This is a work of some utility as a railway feeder. In so far embankment has already been made, it would seem to be worth completion, and the remainder might be constructed as a surface road so as to make it of use throughout."
98,000	14	1.36	12	2	...	The portion taken up by famine has been carried out and completed as Class II.
10,443,606	13	2.85	...	...	3,05,060	

Abstract statement of work done by Famine labour,

Sub-Division, and name of Sub-Divisional Officer.	Serial No.	Name and Index No. of Charge.	Name and class of work, and dates of commencement and closure of work.	Value of work done at normal Public Works Department rates.	Total expenditure on Works—wages, gratuitous and items of work done by contract.
1	2	3	4	5	6
<p>ARANG.</p> <p>BANOO RAIPUR, Sub-Officer.</p> <p>Mr. G. BARIAT, Temporary Upper Subordinate.</p> <p>" C. J. GOSWAMI, Temporary Engineer.</p> <p>" C. H. DAWOY, Do.</p> <p>RAIPUR.</p> <p>Mr. C. WILKINSON, Supervisor.</p> <p>" H. B. LEANOR, Assistant Engineer.</p>			<p>CHHATTISGARH CIVIL DIVISION.—(Contd.)</p> <p>RAIPUR DISTRICT.—(Contd.)</p> <p>III.—Road Works.—(Contd.)</p> <p>(ii) Roads raised in Class.</p>	Rs.	Rs.
<p>DRUG.</p> <p>Mr. C. I. HOPSON, Temporary Upper Subordinate.</p> <p>BANOO K. H. DAREY, Temporary Upper Subordinate.</p> <p>Mr. P. C. LALL, Assistant Engineer.</p>	28	11 Chitoud, 38 Jagtara (Khas).	<p>Raising Dhamtari-Jagdarpur Road, Khalsa Section, to Class II. Length 17½ miles.</p> <p>From 11th December 1899.</p> <p>To 29th September 1900.</p>	46,665	1,30,716
	29	28 Arjunda	<p>Raising Raj-Nandgaon-Arjunda Road, Khalsa Section, to Class II. Length 7 miles.</p> <p>From 11th February 1899</p> <p>To 29th March 1900.</p>	6,514	14,786
	30	21 Head-quarter, Raipur, charge, 26 Hasoud, 2 Nawa-gaon, 4 Gorari, 24 Tumgaon, 29 Bodra, 13 Sevayah and 60 Arang.	<p>Raising Raipur-Sambalpur Road to Classes I and II. Length 72 miles.</p> <p>From 1st November 1899.</p> <p>To 29th September 1900.</p>	1,16,359	3,60,923
			Carried over	1,69,538	5,06,425

DIX B—(Contd.)

arranged by Districts and Civil Divisions.—(Contd.)

Total number of day-units relieved.	Number of day-units relieved per rupee of expenditure on works only.	Ratio of famine to ordinary rates.	Average wage-basis in seers per rupee.	Duration of work.	Probable amount required to complete at Public Works Department normal rates	Remarks.
7	8	9	10	11	12	13
No.	No.	Ratio.	Seers.	Months.	Rs.	
1,435,474	11	2 80	10½	9½	.	The work on this road consisted of boulder collection metal breaking, moorum collection and consolidation, which practically raised the road to Class II.
250,743	17	2 27	12	1½	5 958	A little more than half the work has been done to complete the road as Class II.
3,667,464	10	3 10	12	10	...	Metal and moorum in large quantities have been collected along the road.
5,353,683	...	...	...	...	5,958	

Sub-Division, and name of Sub-Divisional Officer.	Serial No.	Name and Index No. of Charge.	Name and class of work, and dates of commencement and closure of work.	Value of work done at normal Public Works Department rates.	Total expenditure on Works,—wages, gratuitous and items of work done by contract.
1	2	3	4	5	6
GANDAL. Mr. R. H. CUMMING, Temporary Engineer. Mr. C. J. HORSON, Temporary Upper Subordinate. BABOO K. H. DATRY, do. Mr. P. C. LALL, Assistant Engineer.					
GANDAL. Mr. R. H. CUMMING, Temporary Engineer. BABOO S. N. GURTA, Temporary Upper Subordinate. Mr. C. LIVO, do. Mr. A. O'BRIEN, Temporary Engineer. " G. C. PARKAR, do.					
BALODA. BABOO S. N. GURTA, Temporary Upper Subordinate. Mr. C. LIVO, do. Mr. A. O'BRIEN, Temporary Engineer. " G. C. PARKAR, do.					
			CHHATTISGARH CIVIL DIVISION.—(Contd.) RAIPUR DISTRICT.—(Contd.) <i>III.—Road Works.—(Contd.)</i> <i>(ii) Roads raised in Class.—(Contd.)</i>		
			Brought forward ...	Rs. 1,69,538	Rs. 5,66,425
	31	3 Singa and 34 Bemetara (East).	Raising Singa-Kawardha Road to Class I. Length 25 miles From 6th November 1899. To 14th July 1900.	41,458	1,35,713
	32	1 Baloda and 14 Pallari.	Completing Baloda-Pallari Road as Class II, and raising to Class I. Length 12 miles. From 2nd November 1899. To 24th July 1900.	56,273	1,63,240
	33	33 Deokar, 34 Bemetara (East), 52 Deorbija, 32 Nandkathi and 5 Dhamda.	Raising Drug-Dhamda-Deorbija-Bemetara Road to Class I. Length 41 miles. From 1st February 1900. To 31st July 1900.	65,534	1,55,913
			Carried over ...	3,27,803	9,61,291

DIX B.—(Contd.)

arranged by Districts and Civil Divisions.—(Contd.)

Total number of day-units relieved.	Number of day-units relieved per rupee of expenditure on works only.	Ratio of famine to ordinary rates.	Average wage-basis in seers per rupee.	Duration of work.	Probable amount required to complete at Public Works Department normal rates.	Remarks.
7	8	9	10	11	12	13
No.	No.	Ratio.	Seers.	Months.	Rs.	
5,353,683	...	...	...	...	5,958	
1,708,786	13	3'27	12	8½	...	Metal and moorum collected along the road for a length of 16 miles.
2,075,986	13	2'90	12½	8½	...	The whole road has been completed as Class II and metal collected for raising to Class I.
2,160,367	14	2'57	12	6	73,573	Metal and moorum have been collected along the roadside.
11,298,822	...	...	...	...	79,531	

Abstract statement of work done by Famine labour;

Sub-Division, and name of Sub-Divisional Officer.	Serial No	Name and Index No. of Charge.	Name and class of work, and dates of commencement and closure of work.	Value of work done at normal Public Works Department rates.	Total expenditure on Works,—wages, gratuitous and items of work done by contract.
1	2	3	4	5	6
RAJMI. Sis-Convictor H. NALON, Superintendent. Baboo V. B. Datta, Temporary Upper Subordinate. Mr. C. Winthrop, Supervisor. Mr. C. H. Datta, Temporary Engineer. Sis-Convictor H. NALON, Superintendent. Mr. E. Surti, Temporary Upper Subordinate.			CHHATTISGARH CIVIL DIVISION.—(Contd.) RAIPUR DISTRICT.—(Contd.) III.—Road Works.—(Contd.) (ii) Roads raised in Class.—(Contd.)	Rs.	Rs.
			Brought forward ...	3,27,803	9,61,291
	34	10 Abhanpur, 23 Mana, 25 Thelka, 15 Kurud, 44 Charra and 27 Dhamteri (Khas).	Raising Raipur-Dhamtari Road to Class I. Length 48 miles From 26th November 1899. To 22nd September 1900.	80,624	2,86,532
DRUG. Mr. C. J. Hopson, Temporary Upper Subordinate. Baboo K. H. Datta, Mr. P. C. Lall, Assistant Engineer.	35	6 Drug, 40 Aranda and 17 Gunderdehi.	Raising Drug-Gunderdehi Road to Class I from 7th mile and collection of reserve metal and moorum on first 6 miles. From 11th November 1899. To 10th September 1900.	68,063	1,52,592
BALODA. Mr. C. Lyon, Temporary Upper Subordinate. " A. O'Brien, Temporary Engineer. " G. C. PARKAR,	36	35 Tilda	Raising Tilda-Kharora Section of Tilda-Sirpur Road to Class I. Length 15 miles. From 16th March 1900. To 10th August 1900.	7,000	20,972
			Carried over ...	4,83,490	14,21,387

DIX B.—(Contd.)

arranged by Districts and Civil Divisions.—(Contd.)

Total number of day-units relieved.	Number of day-units relieved per rupee of expenditure on works only.	Ratio of famine to ordinary rates.	Average wage-basis in seers per rupee.	Duration of work.	Probable amount required to complete at Public Works Department normal rates.	Remarks.
7	8	9	10	11	12	13
No.	No.	Ratio.	Seers.	Months.	Rs.	
11,298,822	...	...	...	...	79,531	
3,343,266	12	3'55	11½	10	...	Metal broken and stacked along road-side from miles 5 to 14 Moorum collected and stacked from miles 5 to 41 and a portion consolidated in miles 30 to 32 and 48. A large quantity of rubble and ballast originally broken for the Dhamtari Feeder Line has been transferred to the road and sufficient metal now exists along it except in miles 42 to 48 for repairs for some time to come. Some kunkar has also been collected at quarries near miles 6, 7 and 8.
1,835,702	12	2'24	11½	10	...	Metal and moorum have been collected along the road.
298,183	14	3'00	12½	5	...	Metal and moorum have been collected on the 5th mile and at quarries.
16,775,973	...	...	...	...	79,531	

Abstract statement of work done by Famine labour,

Sub-Division, and name of Sub-Divisional Officer.	Serial No.	Name and Index No. of Charge.	Name and class of work, and dates of commencement and closure of work.	Value of work done at normal Public Works Department rates.	Total expenditure on Works,—wages, gratuitous and items of work done by contract.
1	2	3	4	5	6
RAJIM. SUB-CONDUCTOR H. NAVLON, Supervisor. MR. C. WILLFORD, Supervisor. BANOO V. B. DATEY, Temporary Upper Subordinate. MR. C. H. DRACOTT, Temporary Engineer.			CHHATTISGARH CIVIL DIVISION.—(Contd.) RAIPUR DISTRICT.—(Contd.) III.—Road Works.—(Contd.) (ii) Roads Raised in Class.—(Concl'd.)		
			Brought forward ...	Rs. 4,83,490	Rs. 14,21,387
	37	10 Abhanpur and 25 Thelka.	Raising Rajim Branch Road to Class I From 26th November 1899. To 22nd September 1900.	... 10,369	41,836
BALODA. MRS. C. LYON, Temporary Upper Subordinate. " A. O'BRIEN, Temporary Engineer. " G. C. PARKAR, Temporary Engineer.	38	39 Khartowna, 8 Kharora and 21 Head-quarters Charge Raipur.	Raising Raipur-Pallari Road to Class I From 11th November 1899. To 31st July 1900.	... 80,977	1,68,562
	39	4 Gorari	Raising the first 18 miles of Arang-Kharar Road to Class II. From 9th November 1899. To 4th August 1900.	... 30,973	34,499
ARANG. BANOO RAMDIAL, Sub-Overseer. MR. G. BAPTISTE, Temporary Upper Subordinate. " C. J. GREEN-GRASS, Temporary Engineer. " C. H. DRACOTT,			Totals and Averages for (ii) Roads Raised in Class	... 6,05,809	16,66,284

DIX B.—(Contd.)

arranged by Districts and Civil Divisions.—(Contd.)

Total number of day-units relieved.	Number of day-units relieved per rupee of expenditure on works only.	Ratio of famine to ordinary rates.	Average wage-basis in seers per rupee.	Duration of work.	Probable amount required to complete at Public Works Department normal rates	Remarks.
7	8	9	10	11	12	13
No.	No.	Ratio.	Seers.	Months.	Rs.	
16,775,973	...	...	...	...	79,531	
571,037	14	4'03	12½	10	...	Very little metal has been collected, but a large quantity of moorum has been collected in all the miles.
2,067,272	12	2 08	12½	8½	...	Metal and moorum collected on the first 30 miles of the road. Some earthwork also done.
216,072	6	1'11	12	9	...	Metal collected along the road, also moorum collected in miles 27 to 30.
19,630,354	12	2'75	...	...	79,531	

Abstract statement of work done by Famine labour,

Sub-Division, and name of Sub-Divisional Officer.	Serial No.	Name and Index No. of Charge.	Name and class of work, and dates of commencement and closure of work.	Value of work done at normal Public Works Department rates.	Total expenditure on Works,—wages, gratuitous and items of work done by contract.
1	2	3	4	5	6
BALODA. Mr. C. Willford, Supervisor. Baboo S. N. Gupta, Temporary Do. Mr. F. J. Fort, Temporary Engineer. " G. C. PARKAR, Do.			CHHATTISGARH CIVIL DIVISION.—(Contd.) RAIPUR DISTRICT.—(Contd.) III.—Road Works.—(Contd.) (iii) Reserve collection of Metal for Repairs and Renewals.	Rs.	Rs.
	40	6 Drug	... Collection of reserve metal, on Drug-Dhamda Road. Length 6 miles. From 1st December 1899. To 30th April 1900.	17,710	37,397
	41	35 Tilda	... Collection of reserve metal, on Tilda-Simga Road. Length 9 miles. From 10th March 1900. To 10th August 1900.	10,412	25,218
BALODA. Mr. C. Lloyd, Temporary Upper Subordinate. " A. O'BRIEN, Temporary Engineer. " G. C. PARKAR, Do.	42	1 Baloda and 22 Loan.	Collection of reserve metal, on Bhatapara-Loan Road. Length 20 miles. From 22nd October 1899. To 23rd June 1900.	66,004	1,66,571
			Carried over ...	94,126	2,29,186

Abstract statement of work done by Famine labour,

Sub-Division, and name of Sub-Divisional Officer.	Serial No.	Name and Index No. of Charge.	Name and class of work, and dates of commencement and closure of work.	Value of work done at normal Public Works Department rates.	Total expenditure on Works,—wages, gratuitous and items of work done by contract.
1	2	3	4	5	6
DRUG. Mr. C. J. Hopson, Temporary Upper Subordinate, Baboo K. H. DATRY, Mr. P. C. LALLI, Assistant Engineer.	43	6 Drug	CHHATTISGARH CIVIL DIVISION.—(Contd.) RAIPUR DISTRICT.—(Contd.) III.—Road Works.—(Concl'd) (iii) Reserve collection of Metal for Repairs and Renewals.—(Concl'd.)	Rs.	Rs.
			Brought forward ...	94,126	2,29,185
			Reserve collection of metal on Great Eastern Road, from miles 148 to 151 near Drug. Length 4 miles. From 1st February 1900. To 3rd March 1900.	864	1,500
			Totals and Averages for (iii)—Reserve collection of Metal, &c.	94,990	2,30,686
DRUG. RAJINI. ARANG. GANDAI. DHAMTARI, BALODA.	44	3, 4, 6, 7 9, 10 11, 15, 19, 21, 24, 25, 27, 38, 39, 44, and 55.	IV.—Village Tanks. Improving 39 Village Tanks ...	1,42,875	4,02,194.
			Totals and Averages for IV—Village Tanks ...	1,42,875	4,02,194
			V.—Other Works—Miscellaneous.		
			Special repairs to Drug-Gunderdehi Road. Length 18 miles From 15th June 1900. To 10th September 1900.	2,634	5,624
DRUG. Mr. C. J. Hopson, Temporary Upper Subordinate do. Mr. P. C. LALLI, Assistant Engineer.	45	6 Drug, 40 Aranda, and 17 Gun-derdehi.	Carried over ...	2,634	5,624

DIX B.—(Contd.)

arranged by Districts and Civil Divisions.—(Contd.)

Total number of day-units relieved.	Number of day-units relieved per rupee of expenditure on works only.	Ratio of famine to ordinary rates.	Average wage-basis in seers per rupee.	Duration of work.	Probable amount required to complete at Public Works Department normal rates.	Remarks.
7	8	9	10	11	12	13
No.	No.	Ratio.	Seers.	Months.	Rs.	
2618500	..	..	...	...	...
21,000	14	174	12	1	...	Mooram collected for renewals and repairs
2622500	11	243	...	...	..
32713450	12	275	...	...	3,84,591	
5,295,245	13	282	...	...	...	39 Village tanks have been improved.
5,295,245	13	282	...	...	...
23318	13	214	11½	3	...	Completed.
73318	...	...	...	...	...

Abstract statement of work done by Famine labour,

Sub-Division, and name of Sub-Divisional Officer.	Serial No	Name and Index No. of Charge.	Name and class of work and dates of commencement and closure of work.	Value of work done at normal Public Works Department rates.	Total expenditure on Works,—wages, gratuitous and items of work done by contract.
1	2	3	4	5	6
DHAMTARI. Mr. E. SMITH, Temporary Upper Subordinate.			CHHATTISGARH CIVIL DIVISION.—(Contd) RAIPUR DISTRICT.—(Contd.) V.—Other works—Miscellaneous.—(Contd.)	Rs.	Rs.
			Brought forward ...	2 634	5,624
	46	53 Dimur	Special repairs to old Raipur-Dhamtari Road From 11th March 1900. To 28th May 1900.	1,052	4 139
	47	21 Head-quarter Charge, Raipur.	Improving Station Roads and Gardens ... From 3rd June 1900. To 25th August 1900.	4,026	4,025
ARANG. Mr. H. B. LEAROYD, Assistant Engineer. " C. H. DRACOTT, Temporary Engineer.	48	11 Chitod	Constructing Chitod Well ... From 11th December 1899. To 31st July 1900.	477	1,308
	49	15 Kurud	Constructing Kurud Well ... From 28th December 1899. To 29th August 1900.	5,103	15,934
DHAMTARI. Mr. E. SMITH, Temporary Upper Subordinate. SUB-CONDUCTOR H. NAYLON, Supervisor.			Carried over ...	13,292	31,031

DIX B.—(Contd.)

arranged by Districts and Civil Divisions.—(Contd.)

Total number of day-units relieved.	Number of day-units relieved per rupee of expenditure on works only.	Ratio of famine to ordinary rates.	Average wage-basis in seers per rupee.	Duration of work.	Probable amount required to complete at Public Works Department normal rates.	Remarks.
7	8	9	10	11	12	13
No.	No.	Ratio.	Seers.	Months.	Rs.	
73,318	...	...	...	...	...
46,111	11	3'93	10½	2½	...	Completed.
49,777	12	1	12½	2¾	...	Completed.
13,312	10	2'74	10½	7¾	...	Do.
173,202	11	3'12	10½	8	...	Do.
355,720	...	...	...	...	...

Abstract statement of work done by Famine labour,

Sub-Division, and name of Sub-Divisional Officer.	Serial No.	Name and Index No. of Charge.	Name and class of work, and dates of commencement and closure of work.	Value of work done at normal Public Works Department rates.	Total expenditure on Works,—wages, gratuitous and items of work done by contract.
1	2	3	4	5	6
DHAMTARI. Ma. E. SUTRU, Temporary Upper Subordinate. Sub-Conductor H. NAYLON, Supervisor.			CHHATTISGARH CIVIL DIVISION.—(Contd.)		
			RAIPUR DISTRICT.—(Concl'd.)		
			V.—Other Works—Miscellaneous.—(Concl'd.)	Rs.	Rs.
			Brought forward ...	13,292	31,031
	50	27 Dhamtari (Khas).	Constructing Khas Dhamtari Well ... From 30th January 1900. To 7th July 1900.	410	2,032
	51	38 Jagtara	Constructing Jagtara Well ... From 25th February 1900. To 29th September 1900.	1,754	2,498
	52	44 Charra	Constructing Charra Well ... From 5th February 1900. To 31st July 1900.	765	1,293
	53	53 Dimur	Constructing Dimur Well ... From 11th March 1900. To 29th May 1900.	247	972
	54	54 Kaneri	Constructing Kaneri Well ... From 25th February 1900. To 4th August 1900.	276	1,054
	55	57 Koliari	Constructing Koliari Well ... From 28th March 1900. To 4th August 1900.	276	657
DHAMTARI. Ma. E. SUTRU, Temporary Upper Subordinate.	56	...	Surveys, &c. ...	290	290
	57	...	Labourers employed in carrying rice for Civil Department ...	...	...
			Totals and Averages for V—Other Works—Miscellaneous ...	17,310	39,827
			GRAND TOTALS AND AVERAGES FOR THE RAIPUR DISTRICT...	14,05,535	36,24,893

Abstract statement of work done by Famine labour,

Sub-Division, and name of Sub-Divisional Officer.	Serial No	Name and Index No. of Charge.	Name and class of work, and dates of commencement and closure of work.	Value of work done at normal Public Works Department rates.	Total expenditure on Works,—wages, gratuitous and items of work done by contract.
1	2	3	4	5	6
BHATAPARA. Mr. K. F. BATHENA, Temporary Engineer. Mr. C. V. N. SHORTLAND, Temporary Engineer. KOTAH. Rai SAHJIB PRAVAG DASS, Assistant Engineer. Mr. C. E. CHADWICK, Temporary Engineer. CHAMPA. Mr. D. H. COBLAW, Assistant Engineer. Mr. E. G. W. MONTGOMERY, Overseer. Mr. C. V. N. SHORTLAND, Temporary Engineer. BILASPUR. Mr. E. G. W. MONTGOMERY, Overseer. Mr. W. T. ROBINSON, Temporary Upper Subordinate. BABOO MOORHOPADHIA, Temporary Engineer. Mr. L. S. ALLIN, Temporary Engineer. Mr. C. V. N. SHORTLAND, Temporary Engineer. RATANPUR. Mr. C. E. LEFEUVRE, Sub Engineer. BABOO C. CHAKRABATTY, Temporary Engineer.	1	1 Champa, 4 Nipania and 12 Kota	CHHATTISGARH CIVIL DIVISION.—(Contd.) BILASPUR DISTRICT. I.—Railways. Ballast Collection on Bengal-Nagpur Railway From 1st November 1899. To 27th September 1900.	Rs. 79,740	Rs. 44,716
	2	6 Taketpur, 13 Head quarter Charge Bilaspur, 25 Khajari 26 Mungeli and 36 Chatona.	Constructing Bilaspur-Mungeli Railway From 19th May 1900. To 8th September 1900	90,038	1,48,826
			Totals and Averages for I.—Railways	1,69,778	1,93,542
	3	33 Dulorah	II.—Irrigation Works. Constructing Dulorah Irrigation Tank From 19th March 1900 To 1st September 1900.	10,251	48,468
			Carried over	10,251	48,468

Abstract statement of work done by Famine labour,

Sub-Division, and name of Sub-Divisional Officer.	Serial No	Name and Index No of Charge.	Name and class of work, and dates of commencement and closure of works.	Value of work done at normal Public Works Department rates.	Total expen- diture on Works,— wages, gra- tuitous and items of work done by con- tract.
1	2	3	4	5	6
KOTAH. RAI SANTH PRAYAG DASS, Assistant Engineer. Mr. C. E. CHADWICK, Temporary Engineer. CHAMPA. BABOO S. C. SEN, Temporary Upper Subordinate. BABOO N. M. CHOWDHARY, Temporary Upper Subordinate. Mr. B. SHAW, Temporary Upper Subordinate. Mr. D. H. COLLAW, Assistant Engineer. Mr. E. G. W. MONTGOMERY, Overseer.			CHHATTISGARH CIVIL DIVISION.—(Contd.) BILASPUR DISTRICT.—(Contd.) II.—Irrigation Works.—(Concl'd.)	Rs.	Rs.
			Brought forward ...	10 231	48,468
	4	30 Dhuma and 38 Dhanraj.	Constructing Dhanraj Irrigation Tank ... From 14th March 1900. To 18th May 1900.	12,761	28 357
	5	5 Gorbanda	Constructing Hardi Irrigation Tank ... From 10th March 1900. To 18th July 1900	7,051	22,090
			Totals and Averages for II.—Irrigation Works ...	30,063	98,915
			III.—Road Works. (i) New Roads.		
	6	Do.	Constructing Pandaria-Lormi Road, Khalsa Section as Class II. Length 6 miles. From 10th November 1899 To 18th July 1900.	9,199	28,653
	7	15 Taldeori and 22 Bhatgaon.	Constructing Bhatgaon-Bamnidhi Road as Class II. Length 20¼ miles. From 26th December 1899. To 23rd July 1900.	44,353	1,07,319
			Carried over ...	53,552	135,972

DIX B.—(Contd.)

arranged by Districts and Civil Divisions.—(Contd.)

Total number of day-units relieved.	Number of day-units relieved per rupee of expenditure on works only.	Ratio of famine to ordinary rates.	Average wage basis in seers per rupee.	Duration of work.	Probable amount required to complete at Public Works Department normal rates	Remarks.
7	8	9	10	11	12	13
No.	No.	Ratio.	Seers.	Months.	Rs.	
636 462	...	...	...	...	88,854	
4,68,308	17	2 22	12	2	1,14,812	In the main bund (length 1,563 feet) the earth-work has been completed with an average bank of 5 feet and the puddle core in the bottom of the nalla has also been completed. Boulders have been collected for pitching the inner surface of the main bund. Metal has also been collected and broken for the sluice foundation. Waste-weir has been cut down to an average depth of 4 feet along the hill side, representing about half the amount of work to be done under this item. About 700 cft. of limestone has been collected for lime burning purposes. The iron pipes for the sluice outlets have been received at the Kota Railway Station.
300,942	14	3 13	11½	4¼	36,564	The Commissioner remarks :—" See per Item 3."
1,495,712	14	3 29	...	...	2 40 230	The earthwork of the bunds has been completed with the exception of the upper 4½ feet ; excavation for the waste-weir foundation has also been completed. Boulders for pitching the inner surface of the bund, and metal sufficient for sluice and waste-weir foundations have also been collected at site.
390 947	14	3 11	11½	8¼	6,752	The Commissioner remarks :—" This is a road of some utility as a railway feeder. So much has already been done to it that I consider it certainly worth finishing off as economically as possible. From Pandaria to the borders a 2nd class road already exists, and it is desirable to link up with this."
1,480,968	14	2 42	11¼	7	23,745	Earthwork completed throughout ; moorum spread and consolidated in miles 3. 5 to 8 and 15 to 18.
1,871 915	...	...	...	...	30 497	The Commissioner remarks :—" A continuation of the Champa-Bamnidi Road and of some utility. What has already been undertaken is worth completing economically."

Abstract statement of work done by Famine labour,

Sub-Division, and name of Sub-Divisional Officer.	Serial No.	Name and Index No. of Charge.	Name and class of work, and dates of commencement and closure of work.	Value of work done at normal Public Works Department rates.	Total expenditure on Works,—wages, gratuitous and items of work done by contract.
1	2	3	4	5	6
RATANPUR. BABOO C. CHAKRAPATTY, Temporary Engineer.	8	17 Janakpur and 34 Pali.	CHHATTISGARH CIVIL DIVISION.—(Contd.)		
			BILASPUR DISTRICT.—(Contd.)		
			III.—Road Works —(Contd.)		
			(i) New Roads —(Contd.)		
BHATAPARA. Mr. E. G. W. MONTGOMERY, Overseer. SUB-CONDUCTOR E. HAYDEN, Supervisor. Mr. K. F. BATHENA, Temporary Engineer.			Brought forward ..	Rs. 53,552	Rs. 1,35,972
			Constructing Ratanpur-Churie Road as Class II. Length 33½ miles.	5,512	16,503
			From 26th March 1900.		
			To 28th May 1900.		
AKALTARA AND CHAMPA. Mr. E. G. W. MONTGOMERY, Overseer. SUB-CONDUCTOR E. HAYDEN, Supervisor. Mr. K. F. BATHENA, Temporary Engineer.	9	4 Nipania and 32 Loharsi.	Constructing Nipania-Loharsi Road as Class II. Length 19 miles.	49,702	1,22,362
			From 15th November 1899.		
			To 29th July 1900.		
CHAMPA. Mr. E. G. W. MONTGOMERY, Overseer. Mr. D. H. COBLAW, Assistant Engineer.	10	7 Sheorinarain and 22 Bhatgaon.	Constructing Sheorinarain-Bhatgaon-Sarangarh Road as Class II. Length 27 miles.	51,642	94,539
			From 30th November 1899.		
			To 4th August 1900.		
CHAMPA. Mr. E. G. W. MONTGOMERY, Overseer. Mr. D. H. COBLAW, Assistant Engineer.	11	29. Paraswani ...	Constructing Korba-Mahoda-Champa Road as Class II. Length 24 miles.	8,367	27,981
			From 21st March 1900.		
			To 6th August 1900.		
			Carried over ...	1,68,775	3,97,757

DIX B.—(Contd.)

arranged by Districts and Civil Divisions.—(Contd.)

Total number of day-units relieved.	Number of day-units relieved per rupee of expenditure on works only.	Ratio of famine to ordinary rates.	Average wage-basis in seers per rupee.	Duration of work.	Probable amount required to complete at Public Works Department normal rates.	Remarks.
7	8	9	10	11	12	13
No.	No.	Ratio.	Seers.	Months.	Rs.	
1,871,915	...	...	...	...	30,497	
268,617	16	3'07	12	2	68,709	Earthwork completed in miles 1 to 4, 13 and 14 22,000 cft. of moorum spread and 17,000 cft. collected at roadside. The Commissioner remarks :—"I consider this worth completing when practicable as a surface road."
1,609,713	13	2'46	11	8½	11,089	Earthwork completed. The road is moorumed up to 9th mile. In 10th mile the approaches to the river Sheonath have been set out to an easy grade. Between the river and Loharsi moorum has been spread for about 4 miles in places where it was procurable without any length of lead. The Commissioner remarks :—"This is an ordinary railway feeder. Any small improvements necessary to make it open to traffic throughout may well be completed at once. The question of mooruming the remaining five miles can be taken up when funds are available."
1,348,407	14	1'83	11	8	4,455	Earthwork completed for a length of 18 miles. Moorum collected and consolidated between Sheorinarain and Bhatgaon nalla in 10th mile, with the exception of about half of the 2nd and 3rd miles. Sufficient quantity of moorum collected at quarry to complete this; 72,000 cubic feet of moorum collected at Jamdhan quarry. Metal and boulders collected in some of the miles to be utilized in case the road should ever be raised to Class I. The Commissioner remarks :—"Bilaspur-Sambalpur is a misnomer for this road. It is chiefly important as high road for pilgrims from Northern India to Puri, but is not very largely used by wheeled traffic. Whatever has been taken up may, with advantage, be finished off economically so as to make this road serviceable."
396,388	14	3'34	10½	4½	75,954	Earthwork completed for a length of 11 miles and sufficient quantity of moorum collected at roadside and quarries. The Commissioner remarks :—"Useful feeder. Should be completed as economically as possible."
5,495,040	...	...	...	...	1,90,714	

Abstract statement of work done by Famine labour,

Sub-Division, and name of Sub-Divisional Officer.	Serial No.	Name and Index No. of Charge.	Name and class of work, and dates of commencement and closure of work.	Value of work done at normal Public Works Department rates.	Total expenditure on Works,—wages, gratuitous and items of work done by contract.
1	2	3	4	5	6
BILASPUR. Mr. E. G. W. MONTAGNEY, Overseeer, Mr. W. T. ROBINSON, Temporary Upper Subordinate, BABOO MOKHOPADHYA, Temporary Engineer, Mr. L. S. ALLEN, Temporary Engineer, Mr. C. V. N. SHORTLAND, Temporary Engineer.			CHHATTISGARH CIVIL DIVISION.—(Contd.) BILASPUR DISTRICT.—(Contd.) III.—Road Works.—(Contd.) (i) New Roads.—(Contd.)	Rs.	Rs.
			Brought forward ...	1,68,775	3 97,757
	12	6 Jarali and 36 Chatona.	Constructing Approach Roads to Bilaspur-Mungeli Railway, outside Railway limits, as Class II. Length 2 miles. From 1st May 1900. To 15th August 1900.	101	159
AKALTARA. Mr. F. A. HASHMAN, Overseeer, Mr. L. S. ALLEN, Temporary Engineer.	13	14 Rahud and 21 Mulmala.	Constructing Musturi-Sheorinarain Section of Bilaspur-Sambalpur Road as Class II. Length 30 miles. From 24th December 1899. To 8th August 1900.	62,428	64,849
	14	5 Gorbanda, 12 Kota and 30 Dhuma.	Completing the construction of 2nd Section of Kota-Lormi Road as Class II. Length 13 miles. From 10th November 1899. To 17th June 1900.	12,087	32,322
KOTAH. RAI SAHIB PRAYAG DAS, Assistant Engineer, Mr. C. E. CHADWICK, Temporary Engineer.					
Totals and Averages for (i) New Roads ...				2,43,391	4,95,087

DIX B.—(Contd.)

arranged by Districts and Civil Divisions.—(Contd.)

Total number of day-units relieved.	Number of day-units relieved per rupee of expenditure on works only.	Ratio of famine to ordinary rates	Average wage-basis in seers per rupee.	Duration of work.	Probable amount required to complete at Public Works Department normal rates	Remarks.
7	8	9	10	11	12	13
No.	No.	Ratio.	Seers.	Months.	Rs.	
5,495,040	...	...	...	...	1,90,714	
3,021	19	1'57	12	3½	4,384	A portion of earthwork on these various small lengths has been completed.
846,240	13	1'04	11½	7½	25,791	Earthwork completed in miles 8 to 11, 14 to 22 and 25 to 40, and moorum spread and consolidated in certain lengths of the road. The Commissioner remarks:—"So much has already been done that this seems now well worth completing as Class II. It is an important district communication and railway feeder."
438,170	14	2'67	11½	7¼	534	Earthwork completed in miles 10 to 11½ and 15½ to 22. Moorum spread and consolidated in the same portions, moorum collected and stacked at roadside and at the quarries sufficient to complete the consolidation of the entire length. The Commissioner remarks:—"This is a road of some utility as a railway feeder. So much has already been done to it that I consider it certainly worth finishing off as economically as possible, at least to the extent of making it practicable for traffic throughout."
6,782,471	14	2'03	...	...	2,21,423	

Abstract statement of work done by Famine labour,

Sub-Division and name of Sub-Divisional Officer.	Serial No.	Name and Index No. of Charge.	Name and class of work, and dates of commencement and closure of work.	Value of work done at normal Public Works Department rates.	Total expenditure on Works,—wages, gratuitous and items of work done by contract.
1	2	3	4	5	6
BILASPUR. Mr. E. G. W. MONTGOMERY, Overseer. Mr. W. T. ROBINSON, Temporary Upper Subordinate. BAROO MOKTAPADHIA, Temporary Engineer. Mr. L. S. ALLIN, Temporary Engineer. Mr. C. V. N. SHORTLAND, Temporary Engineer.			CHHATTISGARH CIVIL DIVISION.—(Contd.) BILASPUR DISTRICT.—(Contd.) III.—Road Works.—(Contd) (ii) Roads raised in Class.	Rs.	Rs.
	15	6 Jarali, 25 Khajari, 26 Mungeli and 36 Chatona.	Completing as Class II and raising to Class I the Bilaspur-Mungeli Section of Bilaspur-Mandla Road. Length 31 miles. From 25th November 1899. To 30th May 1900.	54,912	1,00,290
	16	3 Setganga ..	Raising Mungeli-Setganga Section of Bilaspur-Mandla Road to Class II. Length 9 miles. From 1st November 1899. To 21st May 1900.	6,681	44,343
	17	8 Sendri and 24 Ratanpur.	Raising Bilaspur-Ratanpur Road to Class I. Length 16 miles. From 20th November 1899. To 15th May 1900.	48,950	1,33,071
	18	2 Akaltara and 16 Baloda.	Raising Akaltara-Baloda Road to Class I. Length 8¾ miles. From 26th February 1900. To 1st August 1900.	16,050	21,197
RATANPUR. BAROO C. CHAKRABATTY, Temporary Engineer.	19	2 Akaltara ...	Raising Akaltara-Pamgarh Road to Class I. Length 11 miles. From 6th November 1899. To 15th August 1900.	37,616	78,617
			Carried over ...	1,61,209	377,523

DIX B.—(Contd.)

arranged by Districts and Civil Divisions.—(Contd.)

Total number of day-units relieved.	Number of day-units relieved per rupee of expenditure on works only.	Ratio of famine to ordinary rates.	Average wage-basis in seers per rupee.	Duration of work.	Probable amount required to complete at Public Works Department normal rates.	Remarks.
7	8	9	10	11	12	13
No.	No.	Ratio.	Seers.	Months.	Rs.	
1,269,313	13	1'93	12	6	1,41,428	Moorum spreading and consolidation completed in miles 15, 18, 23, 24 and 26 to 31 with earthen sides. A large quantity of boulders has been collected, and metal broken and stacked. The Commissioner remarks :—"The utility of this road will diminish with the opening of the railway, but it is complete except for the spreading of moorum already collected, and this should certainly be done."
644,937	15	6'64	11½	6¼	17,248	Earthwork in banks completed throughout. Moorum partially spread and consolidated in miles 3, 4, 6, 7 and 8. The Commissioner remarks :—"This is already of great utility as a link between Bilaspur-Mungeli and Setganga-Pandaria Class II roads. Its importance will be still greater when the railway is brought to Mungeli; it should certainly be completed."
1,671,724	13	2'72	12	6	23,129	Earthwork in bank is completed throughout. 368,000 cft. of moorum spread and consolidated and sufficient quantity of moorum collected at roadside to complete the consolidation of the remaining portion; also 214,000 cft. of metal and 20,000 cft. of boulders collected at roadside and 193,000 cft. of metal and 86,000 cft. boulders at quarries. The Commissioner remarks :—"A useful road. Whatever has been done may, with advantage, be finished off and maintained."
317,955	15	1'32	11½	5	802	Sufficient quantity of metal and moorum has been collected along roadside. The Commissioner remarks :—"I consider that it will be quite sufficient to maintain this as a Class II road. Any necessary culverts or causeways may be constructed."
857,707	11	2'09	11	9¼	16,397	The first 3½ miles is already a Class I road. Throughout the remaining portion of the road the banks have been raised and soling of moorum spread and consolidated; metal also has been collected. The Commissioner remarks :—"This is worth completing as suggested."
4,761,636	...	...	...	...	1,99,004	

Abstract statement of work done by Famine labour,

Sub-Division, and name of Sub-Divisional Officer.	Serial No.	Name and Index No. of Charge.	Name and class of work, and dates of commencement and closure of work.	Value of work done at normal Public Works Department rates.	Total expenditure on Works,—wages, gratuitous and items of work done by contract.
1	2	3	4	5	6
CHAMPA. MR. E. G. W. MONTGOMERY, Overseer. MR. F. A. HASINAN, Overseer. BABOO S. C. SEN, Temp. Upper Subordinate. MR. B. SHAW, Temp. Upper Subordinate. MR. D. H. COBLAW, Asst. Engr. MR. C. V. N. SHORTLAND, Temp. Engr.			CHHATTISGARH CIVIL DIVISION.—(Contd.) BILASPUR DISTRICT.—(Contd.) III.—Road Work.—(Contd.) Roads raised in Class.—(Concl'd.)	Rs.	Rs.
	20	9 Ghora ...	Brought forward ... Raising the 2nd Section of Mungeli-Nandghat Road to Class II. Length 12½ miles. From 8th December 1899. To 7th July 1900.	1,61,209 28,436	3,77,523 48,122
	21	1 Head-quarter charge, Bilaspur.	Raising Bilaspur-Musturi Section of Bilaspur-Sambalpur Road to Class I. Length 8 miles. From 25th December 1899. To 22nd October 1900.	61,943	70,933
	22	28 ...	Raising Pandaria-Setganga Branch of Bilaspur-Mandla Road in Pandaria Zamindari to Class I. Length 13 miles.	1,181	1,574
BHATAPARA. MR. W. T. ROBINSON, Temporary Upper Subordinate. SUB-CONDUCTOR E. HAYDEN, Supervisor. MR. K. F. BATHENA, Temporary Engineer. BILASPUR. MR. E. G. W. MONTGOMERY, Overseer. MR. W. T. ROBINSON, Temporary Upper Subordinate. BABOO MOKHOPADHYA, Temporary Engineer. MR. L. S. ALLIN, Temporary Engineer.	23	1 Champa ...	Raising Champa-Bamnidhi Road to Class II. Length 9¾ miles. From 1st November 1899. To 6th October 1900.	41,373	86,551
			Totals and Averages for (ii) Roads raised in Class ...	2,94,142	5,83,803

DIX B.—(Contd.)

arranged by Districts and Civil Divisions.—(Contd.)

Total number of day-units relieved.	Number of day-units relieved per rupee of expenditure on works only.	Ratio of famine to ordinary rates.	Average wage-basis in seers per rupee.	Duration of work.	Probable amount required to complete at Public Works Department normal rates.	Remarks.
7	8	9	10	11	12	13
No.	No.	Ratio.	Seers.	Months.	Rs.	
4,761,636	...	...	...	...	1,99,004	
533,478	11	1'69	11½	7	1,422	All earthwork completed and the surface moorumed. The Commissioner remarks:—"A useful road; should be maintained."
1,018,973	14	1'13	12	10	16,969	Metal collection has been done.
...	...	1'33	...	...	56,116	The charge was not opened; only boulder collection by contract was done.
1,000,723	12	2'09	11	11	17,945	Earthwork is completed throughout its length and moorum spread and consolidated in three miles. Sufficient moorum collected at roadside and quarries to complete consolidation of the remaining length. The Commissioner remarks:—"Useful and apparently very nearly completed; should be completed."
7,314,810	13	1'98	...	...	2,91,456	

Abstract statement of work done by Famine labour,

Sub-Division and name of Sub-Divisional Officer.	Serial No.	Name and Index No. of Charge.	Name and class of work, and dates of commencement and closure of work.	Value of work done at normal Public Works Department rates.	Total expenditure on Works,—wages, gratuitous and items of work done by contract.
1	2	3	4	5	6
BHATAPARA. SUB-CONTRACTOR, E. HAYDEN, Supervisor, Mr. K. E. BATHENA, Temporary Engineer, Mr. G. C. PARKAR, Temporary Engineer.			CHHATTISGARH CIVIL DIVISION.—(Contd.) BILASPUR DISTRICT.—(Concl'd.) III.—Road Works.—(Concl'd.)	Rs.	Rs.
	24	23 Jummunia Nalla.	(iii) Reserve collection of Metal for Repairs and Renewals. Collection of reserve metal on Bhatapara-Loan Road. Length 11¼ miles. From 28th January 1900. To 15th August 1900.	28,048	51,551
	25	31. Bhatapara ...	Collection of reserve metal on Bhatapara-Nandghat Road Length 11 miles. From 26th February 1900. To 28th July 1900.	16,902	27,149
			Totals and Averages for (iii) Reserve collection of Metal, &c.	44,950	78,700
			Totals and Averages for Road Works (i), (ii) and (iii) ...	5,82,483	11,57,590
			IV.—Village Tanks.		
	26	1, 2, 5, 6, 7, 8, 9, 12, 13, 14 and 16.	Improving and constructing 39 village tanks ...	1,18,188	1,64,311
			Totals and Averages for IV.—Village Tanks ...	1,18,188	1,64,311
			GRAND TOTALS AND AVERAGES FOR THE BILASPUR DISTRICT.	9,00,512	16,14,358
			SAMBALPUR DISTRICT. III.—Road Works. (i) New Roads.		
	1	1 Debra ...	Constructing Debra-Chandarpur Section of Bilaspur-Sambalpur Road as Class II. Length 13 miles. From 26th March 1900. To 20th September 1900.	13,006	32,775
	2	3 Bharpalli ...	Constructing Bargarh-Bolangir Road up to Sonpur border as Class II. Length 21 miles. From 18th March 1900. To 31st July 1900.	27,692	40,030
			Totals and Averages for (i) New Roads ..	40,698	72,805
			(ii) Roads raised in Class.		
	3	1 Debra ...	Raising Debra-Karsia Road to Class II. Length 12½ miles ... From 26th March 1900. To 20th September 1900.	1,661	4,186
			Totals and Averages for (ii)—Roads raised in Class ...	1,661	4,186
			GRAND TOTALS AND AVERAGES FOR THE SAMBALPUR DISTRICT.	42,359	76,991

BILASPUR, BHATAPARA,
AKALTARA, CHAMPA,
RATANPUR AND
KOTAH.

SAMBALPUR.
BABOO ASHUTOSH BANERJEE, Supervisor.

DIX B.—(Contd.)

arranged by Districts and Civil Divisions.—(Contd.)

Total number of day-units relieved.	Number of day-units relieved per rupee of expenditure of works only.	Ratio of famine to ordinary rates.	Average wage-basis in seers per rupee.	Duration of work.	Probable amount required to complete at Public Works Department normal rate.	Remarks.
7	8	9	10	11	12	13
No.	No.	Ratio.	Seers.	Months.	Rs.	
708,178	14	1'84	12	6½	...	A large amount of metal broken and stacked both at roadside and quarries and a certain amount of boulders collected at quarries.
389,328	14	1'61	11	5	...	The Commissioner remarks:—"Already a first class road. Metal collected will be useful for maintenance. No completion necessary."
						Boulders collected at quarry and about 2½ lakhs cft of metal broken and stacked at quarries.
1,097,506	14	1'75	...	...	...
15,194,787	13	1'99	...	...	5,12,879	
2,303,789	14	1'39	...	...	...
2,303,789	14	1'39	...	...	...
21,452,821	13	1'79	11½	12	7,53,109	
349,336	11	2'52	9½	6	25,622	Nearly half of earthwork and three-fourths of moorum collection and half of moorum consolidation have been completed.
						The Commissioner remarks:—"This road is of comparatively small utility."
393,583	10	1'45	9	4½	34,862	About two-thirds of earthwork and moorum collection have been completed and half the moorum consolidated.
						The Commissioner remarks:—"This road is of first class utility."
742,919	10	1'78	...	...	60,454	
34,903	8	2'52	9½	6	17,139	Nearly two lakhs cubic feet of moorum collected and consolidated.
						The Commissioner remarks:—"An ordinary railway feeder road."
34,903	8	2'52	9½	6	17,139	
777,822	10	1'82	10	7	77,623	

APPENDIX C.

GENERAL ORDER No. $\frac{287}{7630}$ F.

CENTRAL PROVINCES, PUBLIC WORKS DEPARTMENT.

FAMINE RELIEF-WORKS.

The following rules and orders are issued for the guidance of officers employed on relief-works conducted under the provisions of the Famine Code and carried out by the Public Works Department.

The rules in Sections XIII to XIX as to Drinking-water, Hutting, Conservancy, Field Hospitals, Epidemic disease, Disposal of the Dead, and Food have been approved by the Administrative Medical Officer.

By order of the Chief Commissioner,

E. PENNY,

Dated 20th September 1899.

Secretary to the Chief Commissioner.

These instructions, based to a large extent on the results of practical experience in the Central Provinces during the famine of 1896-97, and on the recommendations of the Indian Famine Commission of 1898, are for guidance in conducting in the field relief-works under the Famine Code in tracts officially recognized as distressed. They are not applicable to works conducted by the Department of Public Works as ordinary works under Article 39 of the Famine Code, or as test-works undertaken in districts or tracts under observation, but not officially recognized as distressed.

2. The work which has to be done in the field may be conveniently considered under the following headings :—

- I.—Grants.
- II.—Size of Charges and Establishment required.
- III.—Classification of Relief-workers.
- IV.—The Intermediate and Task-work systems :—
 - (i) Description of systems and method of fining.
 - (ii) Weakly gangs.
 - (iii) Change from one system to the other.
 - (iv) The Rest-day wage.
- V.—Organizing relief labour—The Gang.
- VI.—The Task—Setting out work and getting it done.
- VII.—Wages.
- VIII.—Field Accounts and Returns.
- IX.—Checking work, numbers and payments.
- X.—Tools and Baskets.
- XI.—Funds and the Supply of Coin.
- XII.—Kitchens.
- XIII.—Drinking-water.
- XIV.—Hutting.
- XV.—Conservancy.
- XVI.—Field Hospitals.
- XVII.—Epidemic disease.
- XVIII.—Disposal of the Dead.
- XIX.—Food.

I.—GRANTS.

3. Grants for all relief-works carried out by the Public Works Department are to be placed at the disposal of the Superintending Engineer, who will allot them as required by districts. Applications for funds under all heads, including Works, Special Establishment, Tools and Plant, Gratuitous Relief, Other items, &c., should be submitted by the Sub-Divisional Officer for his district, through the Divisional Officer, to the Examiner of Public Works Accounts on the 10th of each month for the following month. Such applications should be submitted at once for funds already expended by the Public Works Department.

II.—SIZE OF "CHARGES" AND ESTABLISHMENT REQUIRED.

4. The number of persons, not workers merely, but men, women and children, that form a "Charge" should not exceed 5,000, or at the most 6,000, nor be less than 2,000, and will require an "Officer-in-charge," whose duties are described below.

5. If the numbers on a work exceed 5,000 an additional work should be commenced without delay, part of the same road may suffice, but it must be a separate "Charge." When the numbers exceed excess should be at once drafted off to the separate "Charge."

6. If the "Charge" contains fewer than 2,000 persons, some reduction in the establishment laid down in the subsequent paragraphs will be needed. For a small number, say 500 to 1,000 a "Work Agent" may have to be substituted for an "Officer-in-charge," and the clerical establishment mentioned under paragraph 18 be considerably reduced. But, save under exceptional circumstances to be dealt with under separate orders, these small Charges are not considered desirable, and are certainly far from economical.

7. The work or portion of a work forming the "Charge" is to be finished before another work forming a Charge, additional to the sanctioned number in each district, is commenced. When finished, the whole of the famine labour is to be moved to another work, that should be marked out in advance. It is imperatively necessary that Commissioners fix the order of urgency of works for each district.

8. The labourers and their families are to be moved from one work to the other as finished at Government expense, and the Sub-Divisional Officer is authorized to arrange with the Deputy Commissioner to pay any reasonable charge for the purpose when movements of any length are necessary. It is considered that this need rarely exceed a maximum of 8 annas per family.

9. The control of the relief-works in a district will be vested in a European officer (to be styled the *Famine Works Superintendent*), who will be specially appointed by the Chief Commissioner for the purpose, and who may or may not be an officer of the Public Works Department. He will act under the orders of the Executive Engineer, to whom he will submit his reports. The Famine Works Superintendent will make frequent inspections of all relief-works in his district, instruct the Officers-in-charge and others on the works in their duties, and see generally that the relief-works are managed according to rule. He will exercise the special powers of fining described in paragraph 26, Section IV. He will keep himself in touch with the Deputy Commissioner and communicate freely with that officer regarding relief operations.

Non-interference by "Famine Works Superintendent" in purely professional matters when he is not an officer of the Public Works Department.

10. If he is not an officer of the Public Works Department, he will refrain from interference in purely professional matters; but if he finds it absolutely necessary to issue orders on the spot to the Officer-in-charge, he will immediately inform the Sub-Divisional Officer of the action he has taken, and the reasons therefor.

11. The Public Works Sub-Divisional Officer will be the Executive Officer for relief-works within his district. He will receive reports, returns and accounts from the Officers-in-charge and dispose of them as laid down in another section. It is his duty to arrange for starting the works, getting together the necessary staff, erection of buildings, supply of tools, water-supply, funds, &c., as prescribed under the various heads in these instructions, and to make frequent inspections of the works.

12. The Sub-Divisional Officer ought not to have to supervise and keep the accounts of more than four, or at most five, "Charges," and when more than 30,000 persons are on famine works in a district, measures must at once be taken to give him assistance, or to form a second Sub-Divisional "Charge."

13. The Executive Engineer under the control of the Superintending Engineer, will direct and control the Sub-Divisional Officers and Famine Works Superintendents in his Division, and will be generally responsible for the management of the works in accordance with rule. Frequent inspections of relief-works will be a very important part of his duties. As soon as it is decided to open relief-works, he will, in communication with the Deputy Commissioners and Commissioner, decide on the quantity of tools and other appliances required, and it will be his duty under the orders of the Superintending Engineer to arrange for their supply.

14. Chapter VI of the Famine Code provides that over each separate large work or group of smaller works shall be placed an "Officer-in-charge." He will receive a monthly salary of not less than Rs. 100 rising by monthly increments of Rs. 10 to a maximum of Rs. 150: the increments to be separately sanctioned in each case for each month, to be strictly conditional on good work and not to be given unless the official does really well. The increments will be sanctioned by the Superintending Engineer on the Executive Engineer's recommendation. He will be appointed from a divisional list of candidates nominated by the Deputy Commissioner or Commissioner and placed at the disposal of the Public Works Department. He will be the cashier and general supervisor on the spot, and will be responsible for the management of the work in accordance with the provisions of the Famine Code and the instructions now issued or that may subsequently issue. His special duties are the following:—

- (i) The admission and registration of all applicants for employment.
- (ii) The classification and treatment of workers and dependants.
- (iii) The calculation and payment of wages.
- (iv) Market arrangements and the supply of food.
- (v) Hearing and investigating complaints.
- (vi) Hospital, kitchen, water-supply, conservancy and sanitary arrangements generally.
- (vii) The care of children and infirm persons, and drafts to the poor-house.
- (viii) The submission of accounts and reports. He will keep the cash-book and be responsible for the entries in it. The method of placing and keeping him in funds must be decided in each case by the Divisional Engineer.

Public Works Department Subordinate to lay out and measure tasks.

15. The laying out of tasks and their measurement and record will be entrusted to a subordinate of the Public Works Department.

16. If the "Charge" contains less than about 3,000 persons, it will be sufficient to give the Officer-in-charge one Sub-Overseer or "Work Agent" to help; if there are more than 3,000 persons two "Work Agents" will be needed.

17. The duties of Sub-Overseers or "Work Agents" will be to lay out work in advance, to have profiles ready where necessary, and to measure up the work done by each gang of workers as described in Appendices VI, VII and VIII. They will keep up the usual Public Works measurement book in addition to entering measurements on the forms, and assess the requisite fines for short work in the manner explained further on. Where there are two or more such men, one of them has to look to the setting out of work ahead, and the other to the proper finishing up of it behind the gangs; one of them is put in charge of all tools on the work. The men will be posted by the Divisional Engineer on indents from the Sub-Divisional Officer, whose duty it is to regulate his indents in accordance with the probable number of workers, and to apply a fortnight in advance of requirements, wherever that is possible,

so as to have the officials on the spot in time to prevent the organization being overpowered by a rush of relief-workers. When no more Public Works Sub-Overseers are available, suitable men should be selected by the Divisional Engineer either by the temporary promotion of Time-keepers, Road Inspectors, &c., or by the engagement of temporary men on a salary of Rs. 40 to Rs. 60 per month on the terms stated in the form of appointment given in Appendix X.

18. The above officials require sanction by the Divisional Engineer or higher authority for their appointment; those now to be mentioned may be appointed by the Sub-Divisional Officer, who should therefore make his own arrangements for them. In every "Charge" of 5,000 persons there may be entertained the following minor establishment:—

- (1) One Clerk qualified to act as Sub-Cashier under the "Officer-in-charge." He will ordinarily be appointed by the "Officer-in-charge," who is responsible for him. Salary Rs. 15 to Rs. 20.
- (2) One Clerk who can keep accounts in English, and who should have sufficient knowledge of accounts to enable him to keep the cash-book and compile the returns properly. Salary Rs. 20 to Rs. 25.
- (3) One Disbursing Vernacular Clerk (called *Gang-muharrir*) for about every 500 or 600 relief-workers. These should be reputable men known to the Tahsildar or other responsible official. Salary Rs. 10 to Rs. 15.
- (4) One Tools-*muharrir*. Salary Rs. 20 to Rs. 25.
- (5) One Kitchen-*muharrir*. Salary Rs. 15 to Rs. 20.

19. The duties of the first two are obvious, and they work as assistants to the "Officer-in-charge." The Gang-*muharrirs* calculate the wages, and do the greater part of the actual counting out and disbursing of wages, each for his own gang, as described in Appendix V. The Tools-*muharrir*, or Store-keeper, has immediate charge of the tools under one of the Sub-Overseers. The Kitchen-*muharrir* assists the Hospital Assistant in the management of the kitchen and is in charge of the kitchen stores.

20. In addition to these there may have to be a Foreman of the water arrangements, with two or more "Mates" on daily wages under him, and an experienced Mate or "Tindal" for nicking out the work set out by the "Work Agent." Any gang required for this purpose should be paid as Class I. There must also be a *Jamadar* of sweepers in charge of the sweeper gang. For smaller "Charges" Nos. (1) and (4) would probably not be necessary.

III.—CLASSIFICATION OF RELIEF-WORKERS.

21. Relief-workers are to be divided into the following classes:—

Workers.

Special Class.—To include all persons in responsible positions, or with special qualifications, as mates, quarrymen, and others who are paid a wage exceeding by a constant difference that allowed to workers of Class I. The difference is fixed at one pice for ordinary gang-mates and two pice for quarrymen and others, in the absence of special orders to the contrary.

Class I, Diggers.—To include all able-bodied men who are capable of performing a fair digger's task, the task to be 75 per cent. of that usually required from able-bodied labourers on ordinary works, or on tasks other than digging not less than 50 per cent. in excess of that required from labourers in Class II.

Class I will only consist of strong and healthy adult males, including able-bodied youths over 14 years of age who are capable of performing a fair digger's task.

Class II, Carriers.—To include all able-bodied persons who are given a fair or moderate task as carriers, or on other works requiring no special skill or aptitude. This class will usually comprise all the females on the work over 14 years of age, all immature youths, and all old or feeble men who are unable to do anything more than carry, or more work than an ordinary woman on other tasks. The maximum task for this class should not ordinarily be more than a half or less than a third of that usually performed by able-bodied labourers on ordinary works.

Class III, Working Children.—To include all children from 8 to 14 years of age who are capable of carrying a fair-sized basket of earth, &c., or doing 50 per cent. of the task assigned to Class II.

Gratuitously Relieved.

22. *Class IV, Adults.*—To include all adult dependants of workers who are unable to work, and other feeble persons who may be given a purely nominal employment on the works, so that they may qualify for the dependant's or minimum wage. They should invariably be fed at kitchens wherever this can be arranged; and cash doles should be given only when this is impossible, or in the rare case of those who have genuine or reasonable objections (founded on caste, for instance) to the consumption of cooked food.

Class V, Non-working Children.—To include all children of workers under 8 years of age, and any above that age who may for sufficient reason not be admitted as working children. The doles differ according as the child is over or under 8 years of age; but it is only in very rare instances that any money wage will be paid to this class. Non-working children are invariably, where possible, to be fed in the kitchen and not given a money dole. An exception to this rule is made in the case of a babe at the breast where the money dole for the child is paid to the working mother. When the mother of an infant-in-arms is being fed in a kitchen, a child's cooked ration in addition to her own will be given her in lieu of the one pice.

23. A Wages Ready-Reckoner Table giving the wages in pice to be paid to each class, for retail prices of grain from 5 to 16 seers to the rupee, is attached (Appendix I).

IV.—THE INTERMEDIATE (a) AND TASK-WORK (b) SYSTEMS.

24. On all Public Works Charges there will be but two systems in force, *viz.*, the *Intermediate (a)* and the *Task-work (b)*. Even on works where the intermediate system is in force, only the able-bodied will be employed under it, separate gangs on the task-work system being formed for the weakly [see under (ii) below].

(i) Description of the systems and methods of fixing.

25. *Intermediate (a) system* or payment by results may be described as task-work without a minimum wage. On this system the gang consists of from 20 to 30 able-bodied workers only, dependants, if any, being fed in the kitchen and the weakly being employed in separate gangs for feeble persons working on the task-work system. An exception to the above rule regarding dependants is the case of a babe at the breast where the money dole is paid to the mother.

The amount due to the gang is calculated on the full rate of wage in force according to the number of workers in each class, on the assumption that the gang will do the full task. If the gang does the full task this amount is paid; but no more than the amount calculated as above can be earned by the gang for work done in

excess of the task. On the other hand, if the work done by the gang falls short of the full task, then the gang is paid an amount which bears roughly the same proportion to the amount due for a full task as the work actually done does to the full task. There is no minimum limit. The gang, which should be as far as possible made up of groups of families from one village, is treated as one body. Its members elect their own headman or mate, and whatever sum may be due to the gang for work done is handed to him for distribution. Individual payments are not made.

26. *Task-work (b) system.*—Gangs working on this system will be larger and consist of not more than 90 members. Dependants of workers will as a rule be fed in the kitchens, save in the very rare cases specified under III.—Classification of Relief-workers. The wages of members of the gang are paid and fines inflicted individually, subject to the following rules:—

- (1) for short work, Diggers may be paid at the Carrier rate;
- (2) for persistent short work, Diggers may be paid at the minimum rate;
- (3) for short work, Carriers may be paid at the minimum rate;
- (4) fines under clauses (2) and (3) above may not be imposed more than twice a week without the sanction of the Famine Works Superintendent;
- (5) the Famine Works Superintendent may, for persistent short work, fine Diggers and Carriers down to a pice below the minimum wage, provided that no worker shall be fined down to or below the minimum more than three times a week;
- (6) cases of combination to resist authority are to be reported to the District Officer and be dealt with by him specially;
- (7) no fines are to be imposed on working children below 14 years of age, or on non-workers.

(ii) *Weakly Gangs for Feeble Persons.*

27. It does not necessarily follow that because some persons are weakly and unable to do a full Class II or Carrier's task, they should be fed entirely gratuitously. If they can do a fair amount of work they should be included in Class II, and fined, if necessary, down to (but not below) the minimum. But such weakly workers should always be kept in separate gangs; otherwise, the fine being upon the whole gang, the able-bodied would suffer for their incapacity.

28. In all cases where the Intermediate (a) system is in force for able-bodied labourers, these "weakly gangs" must be carefully organized and kept separate from the intermediate gangs; otherwise, there being no minimum wage on the Intermediate system, the earnings of a gang including weakly members would tend to become too low for subsistence.

29. When distress is tending to become acute, it will be well to put all new-comers, about whose capacity there is any doubt, in the weakly gangs in the first instance, drafting them off as their condition and capacity are ascertained.

(iii) *Change from one system to the other.*

30. Relief-works under the Public Works Department will as a rule be started on the Intermediate (a) system; but if severe and general distress is certain, the Intermediate (a) system may, with the sanction of the Local Administration, be omitted, and the Task-work (b) system introduced from the beginning. Directly distress becomes acute—which is judged of by the village relief reports, the increased proportion of weakly persons and dependants to able-bodied on works, and the usual general signs—the Intermediate (a) system, if in force should be dropped and Task-work substituted, the Commissioner's sanction being obtained to the change. And in all cases, if the condition of the workers is found to be deteriorating under the former system, this change should at once be made by the Commissioner and reported to the Local Administration.

31. The change from one system to the other can be made without the least trouble or confusion. The forms of accounts and methods of accounting are identical under both systems. The only difference being in the filling up of the Initial Gang Register (Field Account Form No. I), and the way of assessing fines. The derived accounts are identical. When a change is made from Intermediate to Task-work, three small gangs of the latter are combined into one large gang under one Mate only, the other two Mates reverting to Class I.

(iv) *The Rest-day Wage.*

32. Allowances at the non-workers' rates of wage may be paid to all workers on both systems for a weekly day of rest on Sunday or the local bazar day if there is one. But, save where special orders for payment in cash have been issued by the Commissioner, these allowances should take the shape of cooked food from the kitchen instead of cash to all persons who have not been on the works during the three days preceding. This is intended to prevent the influx of persons who came simply to secure the rest-day's wage.

The mates should receive no more than the minimum wage, like all other workers, on rest days.

The rest-day wage for a working child is the same as the working wage, the grain equivalent being 8 chhittaks in each case.

When rest-day wage may be stopped.

If works on the Intermediate (a) system are attracting persons who are not really in need of relief (as when distress is believed not to be severe or is diminishing), the rest-day wage may be discontinued under the Commissioner's orders.

New-comers may be fed on day of arrival.

33. New-comers to works may be given cooked food from the kitchen, if in need of it on the day of arrival. No cash wage to be given unless a fair day's work has been done.

Rest day allowances to be accounted for as wages.

34. The rest-day allowances to workers, when paid in cash, should be recorded in the accounts as wages and not as *gratuitous relief*.

Rest-day wage to be paid when work is stopped by wet weather, &c.

35. For all days on which work is stopped by wet weather or on account of classification, inspection, and the like, wages will be paid as for a rest-day.

The table shows :—

- (1) The wages earned when they do 1,600 cubic feet, or 80 cubic feet each.
- (2) Ditto ditto short work.
- (3) Ditto ditto persistent short work.

The carriers and children have to carry the earth from the side pits, break up the clods and dress the bank.

GRAIN 10 SEERS TO THE RUPEE.

Class.	Wages that should be paid, <i>vide</i> Ready-Reckoner.	Wages actually paid at 80 cubic feet per digger.	Wages paid for short work.	Wages paid for persistent short work.	Remarks.
	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.	
Mate ...	0 2 3	0 2 3	0 2 0	0 1 9	} No fines for these two classes.
Class I, Diggers ...	0 2 0	0 2 0	0 1 6	0 1 3	
Class II, Carriers ...	0 1 6	0 1 6	0 1 3	0 1 3	
Class III, Working Children, 8—14 years ..	0 0 9	0 0 9	0 0 9	0 0 9	
Class V, Non-working Children under 8 years ...	0 0 6	0 0 6	0 0 6	0 0 6	

45. In the case of earthwork, it is practically impossible to measure the amount of work done by each individual digger; the measurement on which the wages are to be calculated should therefore be the measurement of the excavation done by all the diggers of the gang. Fines for short work must necessarily be inflicted on the whole gang, but when the sum due has been worked out, payments should be made to individuals, children never being fined, and no adult receiving less than the minimum wage if working on task-work.

46. For ordinary earthwork the scale below is a fair one :—

Soil.	Pit measurement : Daily task per Digger.	Bank measurement : Daily task per Digger.
Earthwork tasks.		
Soft soil ...	70 cubic feet.	80 cubic feet.
Hard earth or soft moorum ...	48 " "	55 " "
Hard moorum ...	36 " "	42 " "
Very hard moorum ...	24 " "	28 " "

Task for metal-breaking.

47. For metal-breaking, the following tasks are proposed :—

	DAILY TASK.	
	Hard metal as basalt.	Ordinary metal as sandstone.
Class I ...	4½ cubic feet.	6 cubic feet.
Class II ...	3 " "	4½ " "
Class III, Children 8—14 years	1½ " "	2 " "

48. If these tasks are done, the workers doing them, if working on the Task-work system, would get their class wage (see Ready-Reckoner). If the workers do less than these tasks they will be fined under the rules in paragraph 26. Children from 8 to 14 years old would be employed in collecting and carrying stones; they should not be made to break them. They and the dependants, if any, would be paid wages as calculated in the Ready-Reckoner (Appendix I). If the gangs are working on the Intermediate (b) system, they are merely paid a sum which bears roughly the same proportion to the full wages due to the gang for a full task as the work actually done does to the full task.

49. The above tasks are only given as examples : it is necessary that the task be in each case considered with reference to local conditions. It should be fixed, in the first instance, by the Sub-Divisional Officer in consultation with the Deputy Commissioner, on the basis of ensuring to workers wages at least on the minimum scale, increasing gradually to the full scale as the work done approximates to a full day's work, which may be taken at 8 hours.

49-a. The responsibility of making the task on any kind of work a full task for the workers employed rests on the Executive Engineer and his responsible subordinates. Full tasks, as shown by the experience of what carefully watched gangs can perform, must be fixed and exacted.

50. Work should be laid out well in advance of the workers, and the Work Agents must be held responsible for this. In embanking roads with dry earth it is very necessary to have the earth broken up very small; and there are plenty of people to do it. The made road should be constantly dug up and examined; if the earth has been left in clods, it is always the fault of the Mate, and the adult carriers and breakers. In that case, these only (namely, all the working adults of a gang other than the diggers who have done their allotted tasks) should be fined, and not the diggers. A very few days of persistent, but not too severe, discipline of this kind will put almost any gang into shape; if it does not, the Mate is of no use, and should be turned off.

51. At the rear of every relief "Charge" there should be a finishing gang, one that has shown it has learned its work well, and is under an intelligent Mate. It will be the duty of this gang to properly finish up all irregularities left by the less skilful gangs in front. No particular task can be set for them, and the work very largely depends on the Mate in charge, who should be a professional *Tindal*. The whole appearance of the work when finished depends on this part of it being properly attended to.

51-a. The Mates should be included in the strength of the gang in the case of all gangs working on the Intermediate system and should be made to work as a Class I worker. But in the case of gangs working on the Task system, where he has to supervise the work of 80 or 90 persons, he should not be included in the strength of the gang.

The methods of setting out and measuring up tasks as well as the instructions regarding the orderly arrangement of gangs on works are given in Appendices VI, VII and VIII. Type drawings of road construction, causeways, and temporary inspection huts are added as Appendix XXV.

VII.—WAGES.

52. All workers should be paid the wages of their class; and Mates of gangs, with such other men in responsible work who the Sub-Divisional Officer considers require it, are to be paid two to one pice more than the digger, *vide* paragraph 21, *special class*. The wages of workers are to be strictly regulated by the scale of grain equivalents laid down in the following paragraph. These equivalents are to be converted into money on the basis of the current retail price of the staple grain in ordinary local consumption by the labouring classes, and in the state, husked or unhusked, in which that grain is ordinarily sold by retail for consumption. The price to be adopted will be fixed from time to time by the Deputy Commissioner.

Scale of wages according to classes.

53. The following scale will therefore be used:—

Special.—(a) Men with special qualifications such as quarrymen, &c.	... Two pice more than a digger.
(b) Mates of gangs and other persons in responsible posts.	... One pice more than a digger.
Class I.—Adult workers, diggers and men in special gangs (all males over 14)	... Nineteen chhittaks of grain.
Class II.—Adult carriers (over 14 years)	... Fifteen chhittaks of grain.
Class III.—Working children (8 to 14 years)	... Eight chhittaks of grain.
Class IV.—Adult dependants (over 14 years) and minimum wage	... Twelve chhittaks of grain
Class V.—(a) Non-working children over 8 years	... Eight chhittaks of grain.
(b) Under 8 years, but not in arms	... Four chhittaks of grain.
(c) Babies-in-arms	... One pice. (When the mother of an infant in-arms is being fed in a kitchen a child's cooked ration in addition to her own will be given her in lieu of the one pice).

If the exact money equivalent of the preceding grain wages exceeds the nearest pice below by one-and-a-half pice or more, the next highest pice will be given. If the exact sum exceeds the nearest pice below by less than one-and-a-half pice, the next lowest pice will be given.

Punishment of workers who fail to perform their allotted task.

54. Workers who fail to perform the allotted task may be punished as described under the Intermediate and Task-work systems.

55. The grain-rates upon which wages are based to be fixed by the Deputy Commissioner. Excepting in case of urgent necessity, which should be immediately reported, they are not to be altered without previous reference to the Deputy Commissioner. Wages must be paid daily. A Ready-Reckoner showing the wages to be paid in accordance with the varying price of grain is given as Appendix I.

VIII.—FIELD ACCOUNTS AND RETURNS.

Statistical information required.

56. The main points on which statistical information should be recorded are:—

- (i) The total daily attendance of workers and of persons gratuitously relieved on the works; under "Workers" to be shown separately the numbers of men, women and children (under 12 years) and under "Gratuitously relieved" the number of adults and non-working children over and under 8 eight years of age.
- (ii) Workers on the Intermediate system to be shown separately from those on Task-work. The numbers of the men and women in each of the prescribed Classes I and II to be shown, and the working children, Class III, together, irrespective of sex.
- (iii) The total amount of wages paid to "Workers" on Intermediate and Task-work as also the fines imposed, to be shown separately.
- (iv) Payments to Works Establishment to be recorded separately from all other payments.
- (v) The total payments on account of the gratuitously relieved to be separately shown.
- (vi) Payments other than wages or earnings of relief-workers, works establishment, and gratuitous relief to be shown together under "Other items."
- (vii) The total value at normal rates of work done during periods of not more than one month to be brought into comparison for such periods with the expenditure incurred during the same periods.
- (viii) The total value at normal rates of work done up to date to be similarly brought into comparison at intervals of not more than a month with the total expenditure to date.

57. The forms which are to be now brought into use are designed to supply the above information. Field Forms to be introduced supply all Accounts Form No. IV supplies information on points (i) to (vi), and Field Accounts Form No. VI, on points (vii) and (viii).

A full set, both of Field Accounts and Kitchen Accounts Forms, duly filled in for a Charge, is attached for guidance. All returns and accounts are to be made up for the week ending on Saturday.

58. The basis of these accounts is the Gang Register (Field Accounts Form No. I). The same form is employed for both the Intermediate and Task-work systems, and a sample form showing the entries, both as made in the morning and as completed in the evening after payment of the gang, is given for each system.

59. When a gang is first formed by the Officer-in-charge, he fills in the list at the back of the register showing the distribution of its members by classes. This list at the back is the "Mate's List," and is handed to the Mate with instructions to take great care of the forms, as his wages and those of his gang depend on it. The list gives the Mate's name and distinguishing number. Beneath this is a numerical list of the adults and children of each class in the gang and the name of the Gang Muharrir to whom consigned. Lastly, a list of the tools to be supplied by the Store-keeper. A separate slip containing an order for tools is sent with the Mate, to be retained by the Store-keeper as a voucher. The Mate's List is not to be kept up as a nominal roll, no names beyond those of the Muharrir and Mate are required; it is merely corrected as to numbers from time to time as changes occur in the gang. On no account should the Mate be allowed to have any more persons in his gang than are entered in the list.

60. The first morning a gang is on the works, the Gang Muharrir in whose charge it is compares the persons present with the entries at the back, enquires into any differences, and makes any necessary alterations. He then fills up the entries on the face of the register for that day, and issues kitchen tickets to the dependants. He tells them about tasks and fines, and goes on. The Sub-Overseer or Work Agent has meanwhile pointed out the day's task and told the Mate what his duties are, including a word about distributing the task for next day overnight, conservancy, drinking water, tool repairs, and Banias' shops.

61. After the first day, the Gang Muharrir checks attendance early in the morning, and fills in the attendance entries down to *Total workers*, or, in the rare case of there being any dependants attached to the gang, then down to *Total all classes*. He calculates and enters wages and the task due, and tells the Mate what they come to. Some time in the day the Sub-Overseer or Work Agent in charge of that portion of the work examines and measures up the work done on the *previous* day and enters the quantity done under that day on the appropriate line. Thus, the task done on Monday is entered on Tuesday in the Gang Register under Monday below the task set for Monday, and the fine for short work, if any, deducted from the wages due for Monday, which are paid on Tuesday. If there has been scamping or short work, he assesses fines as described under "Description of systems and method of fining" (page 5), explains to the Mate what they are, and why inflicted, and enters the fines and his signature below. He makes a note of all such entries in his own note book. Later in the day the Muharrir comes round again and pays up the gang, collectively if on the Intermediate system, individually if on the Task-work system; deducting the amount of fines, if any. He enters the net amount paid and signs the registers.

62. Each day that he pays the gang wages (and payments are to be made daily) the Muharrir takes the gang register away with him to show to the Officer-in-charge. The Officer-in-charge will compare the entries in the Gang Register with the amount said to have been paid; and return the register to the Muharrir; the latter will then post up his day-book (Field Accounts Form No. II) from the registers and return the latter to the Mate, at latest early next morning. The gang register must always be in the Mate's possession by the time his gang gets to work in the morning.

63. The Muharrir is obliged to recover the fines as assessed by the Sub-Overseer or Work Agent, and has no power to remit them. Only a written order of the Officer-in-charge can remit the fines and that order must be written on the register itself, and this is necessary to prevent fraud.

64. The gang register runs for one week from Sunday to Saturday. After the payment for Saturday has been made, the Muharrir collects all the registers of his gangs and hands them in to the Officer-in-charge. A fresh register is issued for the next week, the opportunity being taken to make up the gang to full strength, or effect any alterations in the classification if such are necessary. No additions to the gang should be made except at the beginning of the week.

65. Form No. II of the Field Accounts is the Muharrir's day-book, or daily abstract from the gang register for each day. It is filled up direct from the latter. Compare entries for December 10th and 11th with figures in the sample gang register as completed in the evening after payment for gang No. 2, Mate Bhapoo, working on metal-breaking on the Task-work system.

66. The Muharrir starts in the afternoon with a certain amount of cash in separate bags for each gang. At every gang he makes payments, ties up the balance, if any, in the bag pertaining to the gang, notes the amount paid in his book and takes away with him the gang register held by the Mate. On returning to the staff-quarters he should pay in the unpaid balance remaining in his hands and put in the "gang registers" as his vouchers for payments. The Officer-in-charge and his Sub-cashier make all necessary comparisons and entries and return him the "gang registers" signed against the last day they are paid to.

The Muharrir then proceeds to write up his day-book in the manner indicated in the example, and hands it in the same evening to the Officer-in-charge. He then returns the "gang registers" to the Mates.

67. A Muharrir will never be in charge of gangs working on different systems, so that his day-book will refer entirely to one system only, and what that system is, must be conspicuously shown on the form.

68. Fields Accounts Form No. III, or the Officer-in-charge's day-book, brings together the totals of all entries for the day in the Gang Muharrir's day-books. It separates the number and amounts for workers under the two systems. The totals of amounts paid to workers and gratuitous will be the amounts to enter in the cash-book under *Wages* and *Gratuitous relief*. Compare, first, the entries for 10th and 11th December opposite Muharrir Kanya Lall, with sample day-book of the latter, Form No. II; second, the totals of columns 8 and 16 added together with entries under *Wages*, and total of column 19 with *Gratuitous relief* for 10th and 11th in the sample cash-book of Officer-in-charge. This form is attached to the cash-book as a voucher for the entries in the latter under wages and gratuitous relief on works, Form No. II from which it is compiled remaining in the Field Office.

The totals of the different columns are carried into the Officer-in-charge's weekly report (Field Account Form No. IV). This should be done daily.

69. As the Officer-in-charge will not have a drawing account, but will be an imprest holder, the ordinary Officer-in-charge's Cash-book—Imprest Cash-book (Public Works Department Form No. 3) is a convenient form to use.

70. The cash-book must be written up daily as payments are made. It must be closed and the original or a duplicate copy despatched once a week, at latest on Sunday, to the District Sub-Divisional Officer.

Only four heads of expenditure. 71. All charges in the cash-book must fall under one or other of the following heads of expenditure:—

- (i) *Wages* includes wages of relief-workers only, or such persons as are paid on gang registers, and are not either gratuitously relieved or in receipt of a monthly wage irrespective of a task.
- (ii) *Gratuitous* includes gratuitous relief given on works in cash and all expenditure connected with feeding in kitchens; but it does not include the salary of the Hospital Assistant in charge, the Kitchen Muharrir or other persons who are on monthly pay, and come under *Work Establishment*.
- (iii) *Work Establishment* includes all pay and allowances of establishment on works in receipt of a fixed monthly salary, and paid on acquittance rolls or hand receipt forms. It should include the pay of all persons on the work not included in and paid on gang registers. The acquittance rolls will generally be prepared and sent from the Sub-Divisional Office to the Officer-in-charge for payment.
- (iv) *Other Items* include all expenditure that cannot be classed under the above three heads, such as hutting, conservancy, water-supply, medical, &c.

72. The allocation under column 6 and the abstract of charges should, if possible, be done by the Officer-in-charge; but if he is unable to do it, it must be done in the Sub-Divisional Office, and columns 37 to 39 of Field Accounts Form No. IV filled in there.

Only three forms of Cash-book vouchers. 73. There will only be three forms of vouchers to be submitted with the cash-book, viz.:—

- (i) Field Accounts Form No. III in support of payments on account of wages and gratuitous relief on works.
- (ii) Acquittance rolls (Public Works Department Form No. 23) for payments to establishment.
- (iii) Hand receipt forms (Public Works Department Form No. 16) for all other payments.

74. A sample form of cash-book and vouchers are attached. Compare entries with Field Accounts Form No. III and Kitchen Accounts Form No. II.

Field Accounts Form No. IV.—Officer-in-charge's Weekly report. 75. Field Accounts Form No. IV is written up (daily from his day-book and Kitchen Accounts Form No. I) by the Officer-in-charge, and four copies are despatched weekly, at latest on Sunday, two to the Sub-Divisional Officer, one to the Deputy Commissioner and one to the Famine Works Superintendent.

How completed in Sub-Divisional Office. 76. The abstract on the front of the form is filled in by the Sub-Divisional Officer, and one copy forwarded to the Executive Engineer, and one copy retained in the Sub-Divisional Office.

If the Officer-in-charge is unable to allocate and abstract the charges in his cash-book under the proper heads of expenditure, this must be done in the Sub-Divisional Office, in which case columns 37 to 39 of Form IV will be filled in there. In other respects the form must be submitted by the Officer-in-charge complete as to figures and the information on the back of the forms.

77. The figures in columns 35, 37 and 39 will be the totals of expenditure under those heads as shown in the cash-book. But the figures in column 36 (*gratuitous relief*) will not necessarily correspond with the total of *gratuitous relief* as shown in the abstract of the cash-book. It might happen that a large stock of grain, &c., had been paid for during the week, which would not be used during the week, or that owing to having large stocks in hand no purchases of food-stuffs had been made. In either case the cash-book would not show the actual cost of gratuitous feeding during the week. The right amount to take for column 28 or to the nearest even rupee for column 36 is the total of expenditure as given in Form III of the Kitchen accounts. This is the actual value of food-stuff, &c., used in feeding the number of gratuitously relieved during the week.

78. This form brings together all the statistical information required about the relief-work—vide (i) to (vi) of paragraph 72. The value at normal rates of work done, (vii) and (viii) of paragraph 72, is supplied in Form VI. It is most important that the form should be carefully filled up in every respect and its punctual submission, at latest on Sunday, by the Officer-in-charge, is equally so. A sample form complete in all details with an explanatory note of how the entries are made is attached.

79. A similar form, but with weekly totals only, exhibiting the latter week by week from the opening of the work, should be kept up in the Divisional Office.

Field Accounts Form No. V.—Weekly report to the Local Administration. 80. Field Accounts Form No. V is a note on the progress reports for the information of the Local Administration. It is posted weekly, at latest on Tuesday, by the Sub-Divisional Officer, one copy direct to the Secretary to the Chief Commissioner, Public Works Department, and another to the Divisional Engineer.

81. This form is compiled from Form IV for all the relief-works in the district. Its punctual submission is essential and need not be delayed on account of the absence of the Sub-Divisional Officer from Head-quarters. All the information required is contained in Form IV, from which this form can be filled in and despatched by the Sub-Divisional clerk. A sample form duly filled in with directions is attached.

82. Field Accounts Form No. VI records the quantities of work done during the past four weeks and the total up to date, values these quantities at normal rates and compares these amounts with the expenditure on the relief-work during the same periods. It supplies the information required under (vii) and (viii) of paragraph 72. In the absence of check measurements of finished work, the aggregate of the work done daily by each gang is taken, but the progress shown should not depend for any length of time on these measurements, which at the best can only be approximate. The progress should be checked at least every fourth week by actual measurements of definite lengths of finished road bank or stacks of metal and moorum, and the progress up to date corrected accordingly.

The Sub-Overseer or Work Agent is responsible for the measurement of work done, and it is he who compiles Form VI every fourth week and hands it in to the Officer-in-charge, who then corrects his own Form IV, and transmits the form to the Sub-Divisional Officer. The latter will keep a copy and forward the original to the Executive Engineer.

83. Instructions regarding Kitchen Accounts Forms Nos. I to V are given separately under "Kitchens," Section XII.

84. The above paragraphs relate to Field Accounts themselves. For all other accounts and the compilation of Famine Accounts in the Sub-Divisional and Divisional Offices, the ordinary Public Works procedure will be followed, but all forms used for the purpose must be distinctly headed "Famine Relief," the expenditure being recorded under the following heads only :—

- (i) Wages.
- (ii) Gratuitous Relief.
- (iii) Work Establishment.
- (iv) Other Items.
- (v) Tools and Plant.
- (vi) Items of work executed by contract, such as mile-stones, collection of rubble (when executed by contract) and other similar work.

IX.—CHECKING WORK, NUMBERS AND PAYMENTS.

85. As a safeguard against fraud and as an instrument of detection, the gang register system is of much value. It is at any time possible to call up a Mate, examine his register, and see how the entries compare with the numbers in the gang.

An examination should be thorough, but mostly in the way of sampling. The progress shown should be checked by test measurements extending over the whole work in some reach, the recorded progress of which can be disentangled from the remainder. For this purpose it is well to have all the accounts of a road, or other long work, closed up at every four miles or so, and a new start made. The numbers are checked by counting the number of gangs at work along a road, &c., and sampling the entries in the *Muharrir's* day-book by careful comparison of about 20 per cent. of the gang registers with the entries, and also with the numbers actually found present. Look through the gang registers, and see whether there have been any recent curious fluctuations. If so, they require explanation, and the Mate's list on the back will throw some light on the subject. The general accuracy of each of the day-books is thus checked in turn. If not satisfied over a *Muharrir's* day-book, it is best to stay there and obtain some tangible results before going further. Supposing the day-books have been found fairly correct, after checking a certain number of totals and the detailed calculations, the totals are then compared with the entries made in the day-book kept by the Officer-in-charge. The totals of this latter day-book are again checked and compared with the entries in Field Accounts Form No. IV, and those again with the payments recorded in the cash-book. The cash-book itself is then carefully gone through as usual.

X.—TOOLS AND BASKETS.

86. The necessity for making timely arrangements for the provision of tools, baskets, cash-chests, &c., has already been brought to the notice of Divisional Officers by the Superintending Engineer under the Famine Code. Local conditions must be the primary factor to take into account. Sub-Divisional Officers must be held responsible for having a sufficient supply ready for the various "Charges" in their districts.

XI.—FUNDS AND THE SUPPLY OF COIN.

87. The credit order is obtained in the usual way, and the problem is to keep the different relief-works in funds on the spot without a very large floating balance in process of transit, and much time and labour wasted in the process. An imprest advance of over Rs. 1,000 is forbidden; it is therefore of no use to give the Officer-in-charge an imprest on any large work. He must keep a cash-book, but he may not have a separate credit in the treasury. The Executive Engineer, in consultation with the Deputy Commissioner, should select convenient sub-treasuries as paying centres and warn the treasury officer of the probable amounts of money he will want there during the month, and also arrange that the Tahsildar in charge shall cash cheques sent to him by Sub-Divisional Officers. The Executive Engineer will then authorize Sub-Divisional Officers, who will, where necessary, be granted a drawing account, to keep the Officer-in-charge in funds. This placing of funds will be done by transfer of cash from the sub-divisional chest. The cheque for the amount will be sent by the Sub-Divisional Officer to the Tahsildar, it having been drawn in the latter's name, but endorsed "for" the Officer-in-charge to whom the money is to go. The Tahsildar will cash the cheque and send the money under guard to the Officer-in-charge, who will enter it on the receipt side of his cash-book in the fourth column "Cash." As Officers-in-charge will not have a separate credit in the treasury, no entries will appear in the 5th, 11th and 12th columns "Bank or Treasury" on both the receipt and charge sides of the cash-book of the Officer-in-charge.

The cash-book of the Officer-in-charge should be closed once a week, every Saturday, and a copy despatched to the Sub-Divisional Officer on the following day, who will, after preliminary check, which may be confined to the check of totals and to the agreement of amounts credited as "Transfers within Division," transmit it to the Divisional Office, where it will be checked and incorporated in the accounts. To avoid any difference under "Transfers within Division" between the cash-book of the Sub-Division and that of the Officer-in-charge, the Sub-Divisional Officer should, as soon as a cheque is issued, send a memo. to the Officer-in-charge stating that a cheque for such amount has been issued on such a date. The Officer-in-charge should not close his cash-book before the amount is received and credited in his cash-book.

The Sub-Divisional Officer should himself start each work and keep the Officer-in-charge in funds while there. A few days' open work will show how things are going. When leaving the Charge, the probable expenditure for the next week should be computed and the Officer-in-charge given enough money to keep him going for that time. After that a watch on his daily reports should be kept, and before he is out of funds his expenditure for the next week should be calculated and a cheque for the amount sent.

88. Each "Charge" will require one iron safe. A safe about $2\frac{1}{2}' \times 1\frac{1}{2}' \times 1\frac{1}{2}'$ high does very well. There must also be two wooden chests, iron-bound and tin-lined, with two hasps and padlocks. Size of chests about $2\frac{1}{2}' \times 2' \times 2'$ high. One of them remains on the work and holds the pice, the other is used in transporting money from the treasury.

One iron safe and two iron-bound wooden chests kept on each Charge for coin.

Three weeks' supply of coin should be available in each treasury.

89. At least three weeks' supply of coin should be available in local treasuries to begin with. At first it will mostly soak into circulation and disappear, but after a short time it will begin to flow back in exchange for silver.

XII.—KITCHENS.

Dependants of all ages to be admitted.

90. All dependants, of whatever age, are to be admitted to the kitchens, as well as any starving people unconnected with the workers who apply for food.

91. The persons attending each Kitchen will be classed according as they are (a) connected with the works, and (b) unconnected with the works. Under Class (a) will fall all non-working dependants, whether children or adults, except babes-in-arms, *vide* paragraph 22, clause 2. Children over 8, who are too thin to do much work, may be classed as dependants if they are willing to take cooked food. No cash payment is to be made to any dependant.

Authority for admission.

92. Under Class (b) any one who brings an order of admission from a Circle Officer or officer of superior rank, and any thin and emaciated child must be admitted.

93. The food to be given is a "khichri" of boiled rice and dhal,—five parts rice, one part dhal; some salt should be added as a matter of course and if possible, a little ghi or oil. The standard measure should be a tinpot $4\frac{3}{4}$ inches in diameter and $2\frac{1}{2}$ inches deep. This holds the cooked equivalent of 3 chhittaks of dry grain. Three of these measures should be given to each adult. From 1 to $2\frac{1}{2}$ measures to each child according to age. In preparing each day's food the average may be taken as 5 chhittaks.

Ordinarilly two meals a day to be given.

94. It is well to distribute food twice daily if possible. But if the Kitchen is crowded this will be difficult, and one meal will suffice. People should be allowed to take away what they cannot eat on the spot.

Kitchen establishment.

95. One cook will suffice for 150 to 200 children. A water-carrier and Muharrir will be required, and perhaps a warder to keep order.

Every member of the Kitchen to have a ticket.

96. Persons of Class (a) will be shown only on the back of the register of their gang. The Gang Muharrir should give each of them a ticket showing:—

Number of gang.

Name and class.

Date of issue.

It will be well to maintain a separate attendance register for persons of Class (b), giving names in the first column and providing a column for each day in the month. They also should be given tickets.

97. The attendance of each day should be abstracted in a Kitchen Attendance Register (Kitchen Accounts Form No. I) and the daily receipts and issues of stores entered in Kitchen Accounts Form No. II. From these, Kitchen Accounts Form No. III will be posted up and despatched to the Sub-Divisional Officer weekly with the other accounts of the relief-work. Petty receipts and expenditure should be shown in a simple form of *jama-kharch*, extracts from which will serve as bills for replenishing an imprest or as vouchers for expenditure. The amount of food charged for in the *jama-kharch*, should of course correspond with the amounts shown in Kitchen Accounts Forms Nos. II and III.

98. Form IV—Stock-book of Utensils, and Form V—Indent for stores, explain themselves. The latter will be attached as vouchers to his bill by the Bania who supplies the stores.

99. Kitchen tickets should be furnished with string so as to be carried hung on the neck. A convenient material is a thin sheet of zinc on which entries can be written indelibly with either sulphuric acid or "*nila tutia*."

XIII.—WATER-SUPPLY.

100. To keep the water-supply pure it is necessary to guard the wells from contamination some days before a work is started. Select some respectable, cleanly man of good caste who can be trusted to attend to the business, and make him foreman of the water arrangements. He must have a sufficient number of Brahman and Kabir or Dhimar mates, water-carriers and distributors under him. He will require about 10 iron buckets (*dols*) of the country shape (with round bottom) for drawing water, and about 60 kerosine tins for carrying water. This will probably be enough for a large gang to commence with, but the proportions will of course differ with the distance of the wells from the work; and in any case the staff and plant will probably have to be increased at one time or another.

101. If kerosine tins are used they require to be strengthened with an iron strap under them and a handle for carrying about. Half of the top should be cut away and hinged on again to prevent water splashing out. The water foreman should take possession of all wells close to the future work a week or so ahead of the workers and at once put each in charge of a Brahman with one or more assistants, and arrange so that these men shall draw water for any one who requires it; but they must *allow no one else to do so* or even to come on the well platform. From that time till the workers leave the locality each such well should remain in charge of the same set of men, and they should never allow any other persons to dip a *lota* into it or to stand on the platform. The rigid preservation of the purity of their water-supply is one of the few sanitary measures which the people will heartily approve of, and in which they will assist so far as they can do it without taking trouble.

102. The actual distribution is most readily effected by utilizing the old established method of setting up *pias*, or drinking places, at short distances apart. A large earthen jar, called a *gol* is purchased for three to four annas and set up a little aslant, on a low mud platform. By the side of it a narrow trough some five feet long is set up on two stakes with a slight slope through it and the further end about two feet above the ground. It is important to take care that this trough shall always be of iron, never of wood.

103. The jar is filled from the kerosine tins (earthen *gharas* must never be used for carrying water in) by the water Dhimars, and by them alone; no one else may touch it. By the side of it sits the distributing Brahman, and when any one comes for water he fills his brass pot, or *lota*, and pours water into the man's jar, or pot, by means of the trough. He must never pour directly into any man's pot or jar, but always into the trough and thence into the jar, placed below the trough and filled from it. It is important to have the trough well above the ground, so that it may not be touched by the jars or splashed from them. It is important to have the trough of iron, because if it does happen to get infected, it will, what with rust and heating in the sun when dry, almost certainly disinfect itself very soon after. The great jars, *gols*, should never be carried on to a fresh place, but should be broken up, and new ones used at each new *piao*. One such *piao* should be set up at every furlong along a relief-work.

104. If there are more wells than need be used, the unused ones should be guarded to keep off the workers, and so also with doubtful or tainted wells. If wells are miles apart and a doubtful one has to be used, it should be disinfected with permanganate of potassium according to Professor Hankin's instructions reprinted as Appendix IX. So also if cholera should break out. If water has to be carried a long distance, it will be found best to carry it in galvanized iron water cylinders fitted with brass cocks and mounted on a cart. Wells should always

be drawn on in preference to tanks, if within a practicable distance. When the source of supply is a stream or river, the drinking water should be drawn from a well or wells sunk in its bed or bank, or from a point well upstream, where the water should be protected from pollution for as great a distance as possible. All this organization about the water-supply may seem to involve a great deal of trouble over a small matter, but a neglect of it will have dire consequences where large bodies of people are collected together, and especially when they are famine-stricken people. These precautions are of vital importance to the public health.

XIV.—HUTTING.

105. Huts or some provision of shelter will generally be required. This must be dealt with by the Sub-Divisional Officer in communication with the Deputy Commissioner, and the nature of the hutting must depend to a great extent on local circumstances. The people are very ingenious in providing shelter for themselves, and a gang should be told off to do this in advance or be given some small allowance for the purpose, the actual provision being kept down to the lowest requirements. It is very easy to waste a great deal of money in providing unnecessary shelter, which the people will absorb and waste as long as they have not to pay for it. A careful check must therefore be exercised in this matter.

106. Effort will be made to procure tents enough to shelter the officials connected with the works, but there may be some left unprovided for. These should be huted in small grass huts with the walls plastered with mud on the inside and all other surfaces white-washed, both inside and out, with a thin wash of clay and lime, in about equal proportions, as a protection against fire. An experiment with a bundle of coarse thatching grass washed in this way will show the men what an effective protection it is. The huts should be 16' x 12' with the ordinary pent roof and made in section so that they can be readily dismantled and re-erected, and easily carried in an ordinary cart, or by coolies. The white-wash and the mud plaster should be renewed at intervals. The sides need only be 6' high. The local staff of each "Charge" should be generally huted in this way.

XV.—CONSERVANCY.

107. The conservancy of every hospital should be carried out by its own staff of sweepers under the directions of the officer in medical charge. For the staff there should be the usual screen and ditch, and the Officer-in-charge should be instructed to have it well looked after for his own sake. The trenches selected and marked out by flags should be 400 yards if practicable from the Camp to leeward. The trenches need not exceed one foot in depth and width, and should be filled in daily. Trench urinals should be formed within the line of the other trenches. It has not been found practicable to make any latrine arrangements which the workers can be induced to use. The most that can be done is to post a few stalwart men, under a competent mate of their own class, to insist on the workers going at least 300 yards off the work in their morning walks: the limits being marked out with flags. They should generally go to the leeward of the work and away from the water-supply, but if there is a village near on that side they should be made to go in the other direction, but never allowed near the water-supply. The Police cannot be spared for this work or advantageously employed on it. It is of great importance to the health of the workers, and if worried into it for a short time they at last accept it as an admitted custom (*dastur*), and give very little more trouble about it. Any Officer-in-charge who will take the trouble can enforce the system and keep it going.

XVI.—FIELD HOSPITALS.

108. Assistant Surgeons or Hospitals Assistants are deputed to these works by the Administrative Medical Officer, and placed at the disposal of the Public Works Department, and their arrangements are looked after by the Civil Surgeon of the district. The Hospital Assistant will have the supervision and be responsible for the water-supply, conservancy, the hospital and the kitchen. It is the business of the Public Works Department to construct the Field Hospitals at sites selected by the Civil Surgeon, and on a plan approved by him. The plan must be as simple as possible, and so arranged that the whole can be burnt down when the structure is abandoned for a fresh one; while at the same time there must be provision for the patients to get quickly out of the enclosure, if it catches fire while in use. This will be secured by forming one side of the enclosure of a mud, or clod wall with a gate-way in the middle, and kept quite clear of hutting. The other three sides may consist of huts; but if the enclosure is entirely surrounded by hutting, the occurrence of a fire will lead to many patients being burnt to death. All the grass hutting should be white-washed with a thin mixture of lime and clay. The site should be selected with reference to shade. A general arrangement of a hospital is given in the plan attached to Appendix II.

109. Cases of a serious and chronic nature or of severe injury may be removed to the nearest dispensary.

All cases of infectious disease, or of dysentery and diarrhoea, as well as cholera and small-pox should be segregated in separate shelters. Hospital extras and necessities are to be issued freely as required by indent on the Officer-in-charge. The hospital diet will usually be a milk-diet, consisting of milk, sago, arrowroot, conji, dalia, and suji, and the more solid foods will rarely be required except by convalescents and attendants.

110. A sufficiency of the prescribed remedies for fevers, dysentery, diarrhoea, bronchitis, cholera, &c., and a fair supply of disinfectants should be kept in stock ready for use at each Relief Camp Hospital, these and hospital extras, &c., being stored in tins properly secured against damp and dirt. A pocket case with a few common splints and bandages should form part of the equipment. A list of requisites for a Field Hospital is given in Appendix XXIII.

111. There must always be a spare hospital ahead of the one in use, so as to be ready for an epidemic. An abandoned hospital must be immediately burned to the ground. If it has held patients suffering from epidemic disease, the site of the burnt hospital should be sprinkled over with about six cubic feet of quicklime sifted evenly over it and the whole then well sprinkled over with water enough to wet the lime thoroughly.

Sufficient attendants, carriers and others, should be supplied to the Hospital Assistant or other officer in medical charge according to the scale laid down by the Civil Surgeon in each case. Relatives of patients should not be allowed to swarm round them, and not more than one member of a family should be allowed to nurse a sick relative. The hospital water-supply should be worked by its own staff and not in conjunction with the general supply for the relief-workers. This is an important point, and it will require some insistence to keep the two quite separate.

Hospital latrines should be formed of well raised platforms of rammed earth screened off into seats. On the seats should be placed at least six inches of dry earth and on this two tarred gumlahs, iron, if procurable, one full of dry earth: the dry earth to be kept stored in bulk under cover against rain. All soiled earth in and about latrines should be at once removed and replaced by clean dry earth.

Urinals should consist of tarred *nands*, and all urine vessels, before being placed in position, should be filled one-fourth full with clean water, and the surroundings kept dry.

XVII.—EPIDEMIC DISEASE.

112. On the occurrence of epidemic disease like cholera, the Camp should move at once to another section of the

work, to a distance, if practicable, of at least five miles, and all such movements should be provided for in advance, the water-supply being specially selected and preserved against pollution some days before hand, whether the move is on account of an epidemic or otherwise.

The Civil Surgeon himself will at once, on the occurrence of epidemic disease, visit the Camp and advise the Officer-in-charge, reporting the occurrence by wire to the Administrative Medical Officer.

The Civil Surgeon himself will at once, on the occurrence of epidemic disease, visit the Camp and advise the Officer-in-charge, reporting the occurrence by wire to the Administrative Medical Officer.

XVIII.—DISPOSAL OF THE DEAD.

113. There must always be deaths on these works; if unhappily an epidemic should break out there will be numerous deaths, and the disposal of the dead is a matter that must be attended to.

The workers will not attend to it properly; in general they have not the means, and many of them do not seem to care much more in the matter than to get rid of the body in some moderately respectable manner. They will bury a body just under the surface, or they will just singe it and throw it into any accessible running water. At every three or four miles of a relief-work there should be a burying-place for Hindus and another for Muhammadans. The two places should, if possible, be on some locally accustomed spot, they should be far apart and neither should be near a village nor within half a mile of the work. Each should have a very small appropriate staff.

At every three or four miles of a relief-work there will be burying-places for both Hindus and Muhammadans, within half a mile of the works.

114. In an epidemic it is difficult to find wood enough to burn bodies. At the police guard, or other convenient place, there should be arrangements for the burial, free of charge, of every Hindu body which friends do not bind themselves to burn. For the Muhammadan cemetery there should be one or two grave-diggers, preferably of the *Gorkund* class, who would keep a certain number of graves ready dug. The grave should be not less than five feet deep, and the dead should be completely and decently covered in. Unclaimed bodies should be taken charge of by the Police and buried. If this organization is got into train from the first it will be ready against the occurrence of an epidemic, and it can then be extended to any required extent. But if a skeleton organization is not ready, then it cannot be improvised in the rush of an epidemic, and corpses will be thrown into every adjacent stream or *nullah*, or left lying about in the fields.

Arrangements to be made for burial free of charge, where absolutely necessary.

Arrangements to be made for burial free of charge, where absolutely necessary.

XIX.—FOOD.

115. So far as present experience has shown, there is no reason to expect any deficiency in the actual supply of food; but it is desirable that the quality should be looked into very frequently and immediate action taken against anyone found selling unsound food. The food trade on a full-sized Famine Relief Charge is greater than that in any ordinary small Indian town, and if special facilities are given to respectable local traders, they will be careful not to lose them by selling unsound food, or worrying the people with needlessly frequent changes in their prices. Following the principles of Article 74, Famine Code, the undermentioned advantages can be offered, among others, in exchange for fair trading:—A small grass hut for a shop situated near a *piao*, and within the range of the treasure or other guards; assistance in organizing transport of grain from the nearest mart; prompt and free exchange of all his copper into silver paid into the local treasury to his credit. It is usually quite easy to find several respectable men who can understand the value of such advantages to their trade, and are willing to give honest goods and reasonably steady prices in exchange for them, so long as they are pretty closely looked after. But it may occasionally occur that a relief-work is situated in such a remote locality that private traders are unwilling to go there without other inducements than those noted above. In that case, or in similar exceptional cases requiring exceptional treatment, the Deputy Commissioner of the district would be justified in contracting with a grain-dealer for the supply of grain on the works for a stated period and on terms to be mutually agreed upon.

In inducements to be offered to grain merchants and others for fair trading in the supply of food-grains, &c.

In inducements to be offered to grain merchants and others for fair trading in the supply of food-grains, &c.

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APPENDIX II.

NOTES ON THE FORMATION OF A FAMINE RELIEF CAMP.

The following list, although not absolutely exhaustive, contains all the essential articles found by past experience as necessary to start a Famine Relief Camp, and the accompanying notes may be found useful as a guide to other matters connected with the works:—

Site and Head-quarters Camp.

1. The camp should be laid out in advance, and as a sample of the requirements the arrangement shown on the accompanying plan may be followed in a general way.

The site should be carefully selected and, although the proximity of water is essential, the camp should not be directly on the banks of a nalla.

2. A sufficiency of tools must be sent out in advance; these should be kept in a separate enclosure and methodically arranged; every effort should be made to keep an accurate record of the receipts and issues.

Tools.

3. Wells must be started in advance and fenced in; each well will be under a guard who will be the only persons allowed to draw water; suitable arrangements must be made for drawing the water, and there should be a good ramp with an outward slope all-round for drainage.

Wells.

4. There must be a good store of grain on the works and an agreement should, before the work is started, be drawn up with a reliable Bania for this requirement in consultation with the Deputy Commissioner.

Grain supply.

5. Arrangements with the Deputy Commissioner for the supply of small coin and copper must be made in advance. Police guards during transit of coin will be necessary. A small Police guard will also be found necessary at each camp.

Coin for payment. Police guard.

6. When all the articles mentioned in the list are at site, and when all the abovementioned arrangements are made, and the staff duly appointed, intimation should then be formally given to the Deputy Commissioner that the camp is ready for the admission of relief-workers.

Intimation to Deputy Commissioner on completion of arrangements.

7. After admission, the workers should be employed in making their chuppers, the lines for which should be previously selected. Where no jungle exists, arrangements must be made before-hand, and a supply of grass or mat huts provided in advance. These must be arranged in regular streets on a selected site, and are on no account to be dotted about irregularly all over the works.

Hutting.

8. If the camp is a metal-breaking one, arrangements must be made before-hand, either at the quarry or at the roadside, the latter if possible for the supply of at least 20,000 cubic feet of rubble, not more than $\frac{1}{4}$ cubic foot in size, ready for the relief-workers to break, and a continuous supply to meet the requirements must thereafter be forthcoming. Ordinary Public Works contractor may be employed for this purpose, as quarrying and blasting involves skilled labour and is not suitable for relief workers.

Rubble for metal-breaking.

9. If the camp is engaged on road construction, the Executive Engineer must have at least 5 miles of "Section," properly graded, ready for the workers, and must keep the section well ahead to avoid work coming to a standstill. A "survey" in detail of the line is not absolutely essential, but the road must be carefully aligned and sectioned.

10. When the gangs are formed, which will be one of the first duties of the Officer-in-charge after the admission of applicants, and they are ready to commence work, stone-breaking should be carried out in strict accordance with the detail instructions which will be separately issued.

11. If engaged on road construction, the gangs should be separated by a space of 400 feet, within which each will work until that portion is completed, but no excavation is to commence until the centre line and the pits have all been accurately nicked out.

12. Work will then proceed in accordance with instructions which will be separately issued.

13. All crowding on works must be carefully avoided, and the strictest discipline must be maintained, or every thing will get into confusion.

14. The duties, in detail, of the Work Agent, the Gang Muharrirs, and Mates, including the method of measurement of work and mode of payment, will all be separately set forth in full detail for the guidance of Officers-in-charge.

15. These latter will also be supplied with sample forms, fully entered up, of all initial accounts they will be expected to submit, and full explanation of every item will be attached.

16. Sanitary arrangements must be most carefully attended to from the commencement. Guards should be posted, and made conspicuous by special badges, to see that people commit no nuisance within the area marked out by special flags. In a metal-breaking camp a specially selected ground well away from all wells should be marked out, and on road construction, where the workers may extend over several miles, flags may be posted 300 yards from line of road on either side.

Enclosures.

- 1 List.
- 2 Plans.

General Abstract of cost of Tools, Hutting establishment and other Miscellaneous items required for the formation of a Camp of 6,000 workers.

Serial No	Sub-heads.	Amount.	Total.
	(I) TOOLS AND PLANT.	Rs.	Rs.
1	General	2,381	
2	Kitchen and Hospital	686	
3	Standing camp for Sub-Divisional Officer and Famine Works Superintendent.	367	3,434
	II.—HUTTING AND OTHER ITEMS.		
1	Hutting	1,838	
2	Miscellaneous	728	2,566
	GRAND TOTAL ..		6,000 or Re. 1 per worker.

Note.—The cost of tools for metal-breaking and construction, &c., would vary according to local requirements. Allowing approximately Rs. 1,000 for these tools for every 2,000 workers, the additional cost for a camp of 6,000 workers would be Rs. 3,000, thus bringing up the total cost of formation of camp to Rs. 9,000 or Re. 1-8-0 per worker.

I.—Tools and Plant.

List of articles required for a Famine Relief Camp of 6,000 workers.

No.	Description.	Cost.	Remarks
	(1) GENERAL.	Rs	
1	Iron cash chest with duplicate keys at Rs. 50 each ...	50	
2	Teakwood boxes, tin lined, for copper, with double hasp, 3" brass at Rs. 24 each.	48	
75	Iron water-barrels, 2' diameter × 3', 50 gallons, with brass tap, for carriage and storage of water at Rs. 24 each.	1,800	
20	Camp tables at Rs. 7 each	140	
20	Chairs at Rs. 4-8-0 each	90	
20	Stools at Rs. 2 each	40	
75	Tin badges and belts for Mates at Re. 1 each	75	
24	Hurricane lanterns at Rs. 3-8-0 each	84	
12	Street lamps with poles at Rs. 4 each	48	
1	Small cheap clock	6	
	Total ...	2,381	
	(2) TOOLS FOR KITCHEN AND HOSPITAL.		
	(a) Kitchen.		
6	Large copper or brass degchies for boiling rice and dal at Rs. 12 each.	72	
9	Small copper or brass degchies for boiling rice and dal at Rs. 6, each.	54	
600	Tin plates (Sunkies), at 3 pies each	10	
600	Tin mugs or gurgahs at 3 pies each	10	
60	Gurrahs, at Re- 0-1-0 each	4	
9	Strong wooden boxes, large, for keeping rice, dal, &c., with good locks, at Rs. 6 each.	54	
	Total ...	204	

No.	Description.	Cost.	Remarks.
(2) TOOLS FOR KITCHEN AND HOSPITAL.—(Concl'd.)		Rs.	
(b) Hospital.			
3	Large copper degchies at Rs. 12 each	36	
6	Small do at Rs. 6 each	36	
30	Country cots at Re. 1 each	30	
30	Do. blankets at Rs. 2 each	60	
2	Rough almirahs made of packing cases for keeping medicines at Rs. 10 each	20	
1 set	Hospital medicines and surgical instruments, &c.	300	
10	Glazed gumlahs (Bed-pans), at 8 annas each	5	
Total		487	
Total (a) and (b)		691	
(3) STANDING CAMP FOR SUB-DIVISIONAL OFFICER AND FAMINE WORKS SUPERINTENDENT.			
1	Hill tent, 10' × 10', with bath-room	300	
1	Wash-hand basin and stand	5	
1	Camp bed	18	
1	Do. commode	5	
1	Galvanized iron bath tub	7	
2	Camp tables	16	
2	Chairs	6	
1	Easy chair	10	
Total		367	

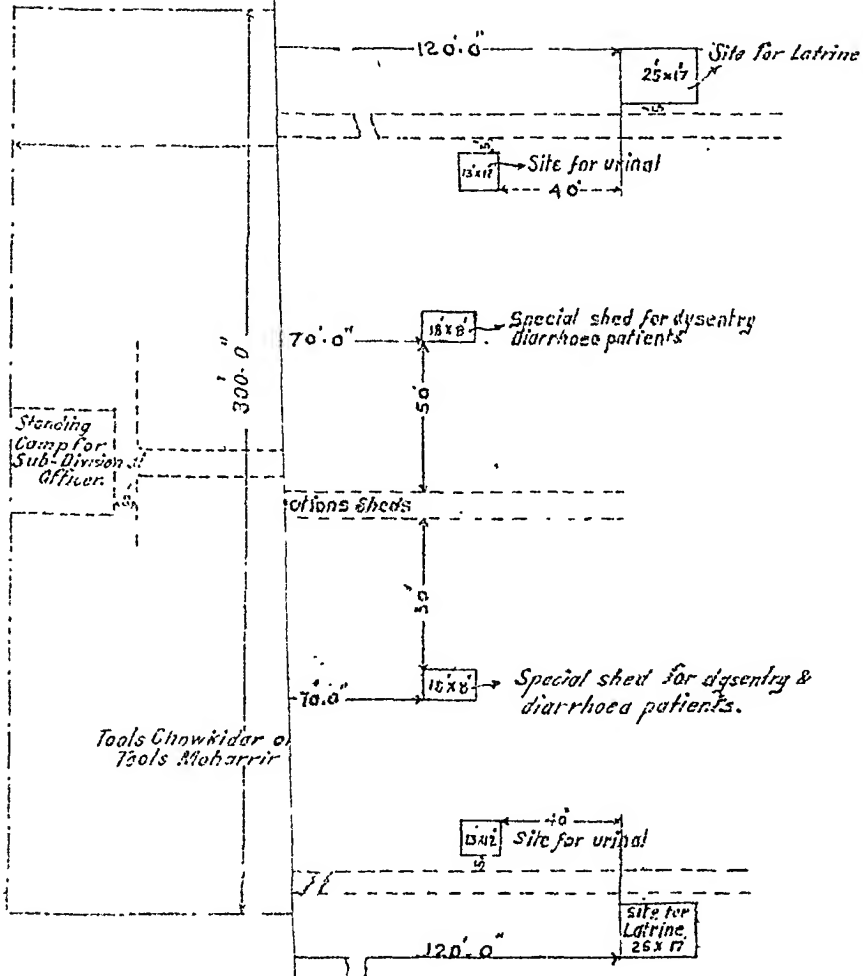
II.—Hutting and other Miscellaneous Items.

List of requirements for a Camp of 6,000 workers.

No.	Description.	Cost.	Remarks.
(1) HUTTING.		Rs.	
1	Constructing Camp for Office, Hospital, Staff-quarters, &c., as per details attached.	1,338	
25	Moveable sheds for piaos at Rs. 10 each	250	
1	Materials for coolies' huts for Camp of 6,000 workers, say	250	
Total		1,838	
(2) MISCELLANEOUS ITEMS.			
240	Empty Kerosine oil tins at Re. 0-3-0 each	45	
150	Yards coir rope	18	
75	Balls good twine at Re. 0-4-0	19	
36	Doles (Buckets) for drawing water at Re. 1 each	36	
75	Tin-pots at Re. 0-2-0	10	
60	Spouts for piaos at Re. 0-4-0 each	15	
75	Gurrahs at Re 0-1-0 each	5	
600	Bamboos for flags, &c., at Rs. 5 per hundred	30	
30	Maunds white lime at Re. 1 per maund	30	
150	Cotton net bags for coins as made in Nagpur Central Jail at Re. 0-8-0 each.	75	
40	Mounting water-barrels on light carts at Rs. 10 each	400	
	Sundries	45	
Total		728	

60 ft = 1 inch

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APPENDIX II-(a).

WATER-SUPPLY OF FAMINE RELIEF CAMPS.

DISTRIBUTION OF WATER.

General Remarks.

There being at present great scarcity of water everywhere, strict precautions must be taken against waste and contamination. The arrangement proposed below entirely does away with the hand-to-hand distribution of water and the dipping of *lotas* in water vessels, and removes all chances of contamination likely to arise from the use of earthen vessels more or less imperfectly baked.

The iron drums 2' x 3' (costing about Rs. 20 each) proposed to be substituted for earthen nands will last throughout the famine operations and will on their termination find a ready sale in the market (for the storage of grain, oil, water, &c.). Similar drums placed on light carts can be used for the carriage of water. They will hold 60 gallons and cost about Rs. 35 each including carts. Relief-workers will ordinarily be employed for drawing the water-carts. Sketches are herewith attached showing—

- (1) Method of filling at well.
- (2) " of delivery at camp and at road-side piaos.
- (3) Details of a portable piao.

The accessories required and the method to be adopted are described below.

I.—FILLING AT WELL.

Before drawing water, the waterman washes his hands with the permanganate solution kept on a stool for the purpose. Water is then drawn out of the well in *doles*, as usual, and poured into the funnel pipe which delivers into the water-carts. At night, or whenever required by the Hospital Assistant acting under the orders of the Civil Surgeon, all the *doles* with their ropes must be kept soaked in the permanganate solution contained in the iron vessel specially provided for the purpose.

Accessories required and approximate cost.

	Rs.	a.	p.
4 Iron doles at Rs. 1-2-0 each
4 ropes for doles at Re. 1 each
4 tin funnel pipes at 12 annas each
1 iron drum with $\frac{1}{2}$ " tap for permanganate solution for washing hands
1 iron vessel for disinfection of doles and ropes at night
2 rough stools for drum and vessel at 8 annas each
Total cost	...	17	0 0

II.—CARRIAGE TO CAMP AND ROAD-SIDE PIAOS.

This will be effected by means of water-carts. For short leads, the smaller ones (2' x 3', 60 gallons) are to be used, drawn by coolies, of whom 2 to 4 will be required per cart according to the lead and the strength of the coolies. For very long leads, the larger galvanized iron barrels (2' x 5', 100 gallons) may, when absolutely necessary, be used, drawn by bullocks.

Accessories and approximate cost.

Iron barrel, 2' diameter 3' long with cover and $\frac{1}{2}$ " tap, Rs. 20 each.
Iron barrel mounted on light carts or rengis, Rs. 35 each.

III.—DELIVERY AT CAMP AND AT ROAD-SIDE PIAOS.

For the free delivery of water from the water-carts into the barrels of the piaos by means of funnel pipe, it is necessary that the carts should be led up to a sufficiently high level besides the piaos. For the fixed piaos at camps, which will be on comparatively level ground, a natural elevation will not generally be available and a ramp must be thrown up, costing say Rs. 4 to Rs. 5 each. But for the movable road-side piaos, such an expenditure would not be justifiable, and the necessary height must be secured by taking advantage of side-long ground, nalla banks and sides of road-cuttings and embankments or any other elevation ready to hand. On existing roads borrow pits will serve admirably for the piaos, and on new roads a borrow pit may be excavated to the desired depth wherever necessary and the earth utilized for road embankment. Failing these expedients, metal and moorum stacks may be made to serve the purpose, and the cost of making an earthen ramp avoided.

IV.—DESCRIPTION OF A PORTABLE PIAO.

The piao will consist of an iron barrel 2' diameter* 3' long, with $\frac{1}{2}$ " brass tap placed on a rough wooden trestle and kept cool by being covered with straw and watered. There will be a rough stool for the waterman, who has only to open the tap, to allow water to flow freely through the narrow trough set up on stakes as laid down in paragraph 102 of G. O. No. 287-7630, dated the 20th September 1899. There will be a stiff wire brush for scrubbing the inside of the barrels from time to time.

V-shaped tin drains will be laid for carrying away all spillage and preventing the formation of slush in the immediate vicinity of the piaos. The piaos fitted up as above will be enclosed within a 6' x 6' shed, the whole being so designed as to be easily removable from place to place. There will be a bottle of permanganate solution on a rude shelf at one corner of the shed for the disinfection of the barrels, whenever required by the Hospital Assistant acting under the orders of the Civil Surgeon.

Accessories and approximate cost.

	Rs.	a.	P.
1 removable shed (6' x 6') at 3 annas per square foot	...	7	0 0
1 iron barrel (2' x 3') with cover $\frac{1}{2}$ " tap covered with straw at Rs. 20 each	...	20	0 0
1 rough trestle for the above	...	1	12 0
1 stiff wire brush	...	1	0 0
1 funnel pipe	...	0	12 0
1 iron trough with stand	...	0	4 0
1 rough stool	...	0	8 0
14 running feet tin drains at 1 anna per running foot	...	0	14 0
(a) Total cost of a movable piao, say	...	32	0 0
Add for ramp in the case of a fixed piao	...	5	0 0
(b) Total cost of a fixed piao at camp	...	37	0 0

* N. B.—All barrels will be horizontal so that they may be used for piaos or for carting water.

APPENDIX II-(8).

WATER-SUPPLY.

UTILIZATION OF SURFACE WATER FOR DRINKING PURPOSES.

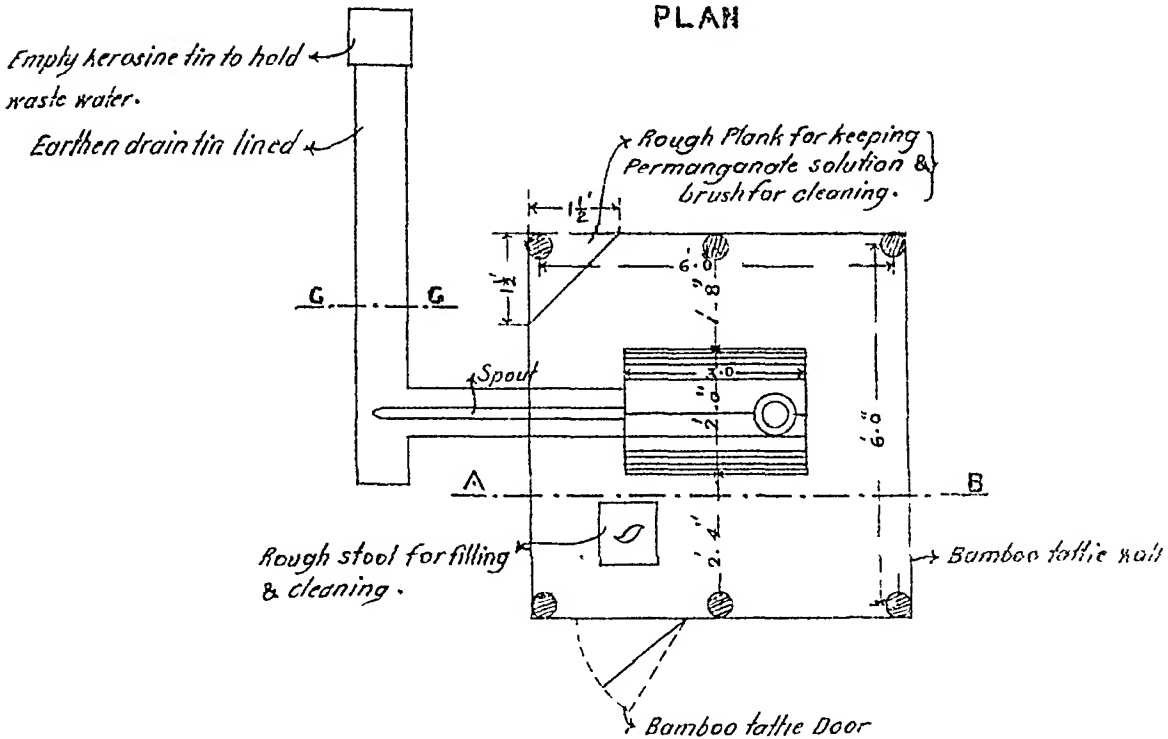
This will be practicable where (i) in the case of streams which have ceased to flow a considerable body of water is held back by a rocky out-crop in the nallah bed or where (ii) in the case of streams which are still running, the flow can be arrested by a series of temporary bunds. The water should be filtered through sand, moorum or any other porous stuff ready to hand before use. In order to effect this (a) a bund of sand or moorum should be thrown right across the pool at its deepest part, if it is not very wide; or at one or more points along the banks in the form of groynes, if very wide; and (b) one or two wells or trenches excavated in the body of the dam, for drawing water. Where stone is abundant, it will be economical to build the steining of rough dry stone masonry. But where the pool is deep and stone scarce, corrugated iron culvert pipes (18 B. W. G. 3' diameter, costing Rs 5 per ft.), may very conveniently be used for the purpose, the pipes being perforated at the bottom for facility of inflow. If two such wells are provided at one place, taking 6' as the length of each, the cost comes to Rs 60 which is inconsiderable. The culvert pipes can moreover be removed and utilized elsewhere when the camp is closed or removed to another place. For the first week or so water should not be used out of these wells for drinking purposes; but they should be constantly drawn on, and the water baled out and thrown back into the nallah if it cannot otherwise be utilized. This will induce a flow through the filter bund of sand or moorum which will thereby be washed clean and a scum will ultimately be formed on the waterfaces of the bund. This scum will help in effecting a thorough purification, and once it is properly formed and the process of horizontal filtration regularly sets in, the well may be safely used for drinking purposes.

WATER SUPPLY FOR FAMINE RELIEF CAMPS

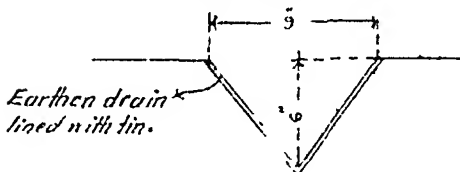
PLAN OF A MOVEABLE SHED FOR PIAO

Scale 3' feet = 1 inch

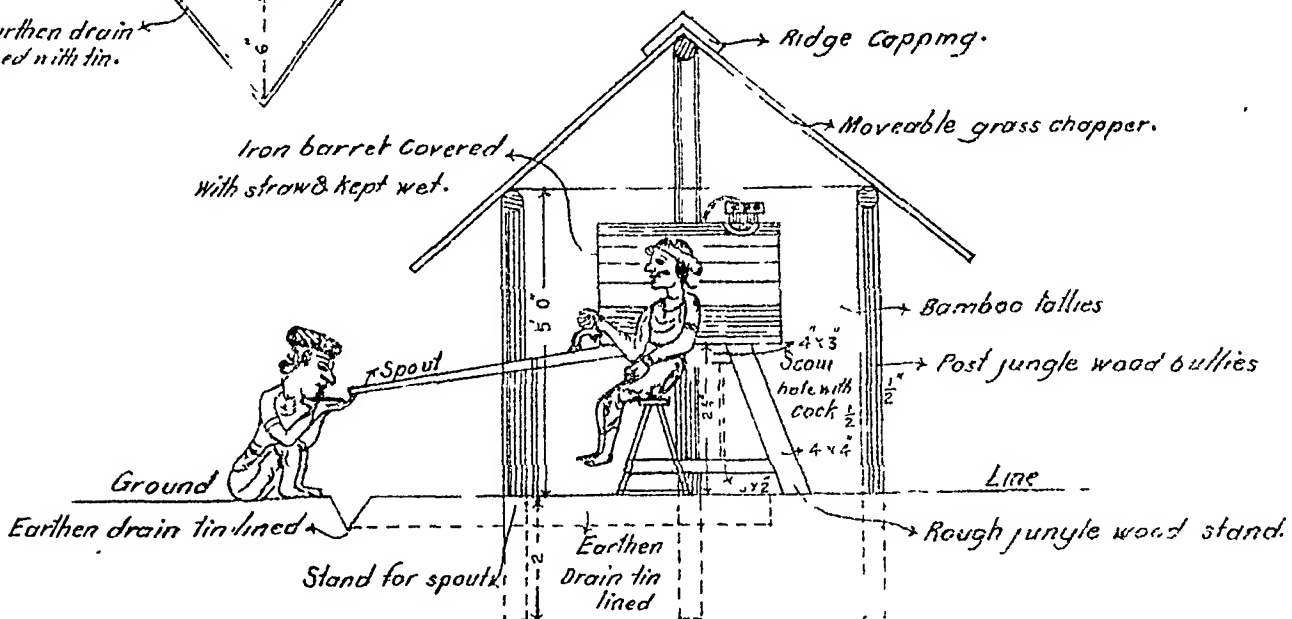
PLAN



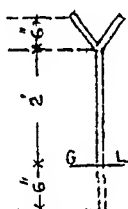
ENLARGED SECTION OF DRAIN ON LINE C.C.



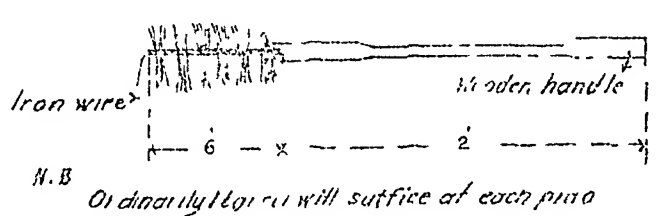
SECTION ON A.B.



ELEVATION OF STAND FOR SPOUT



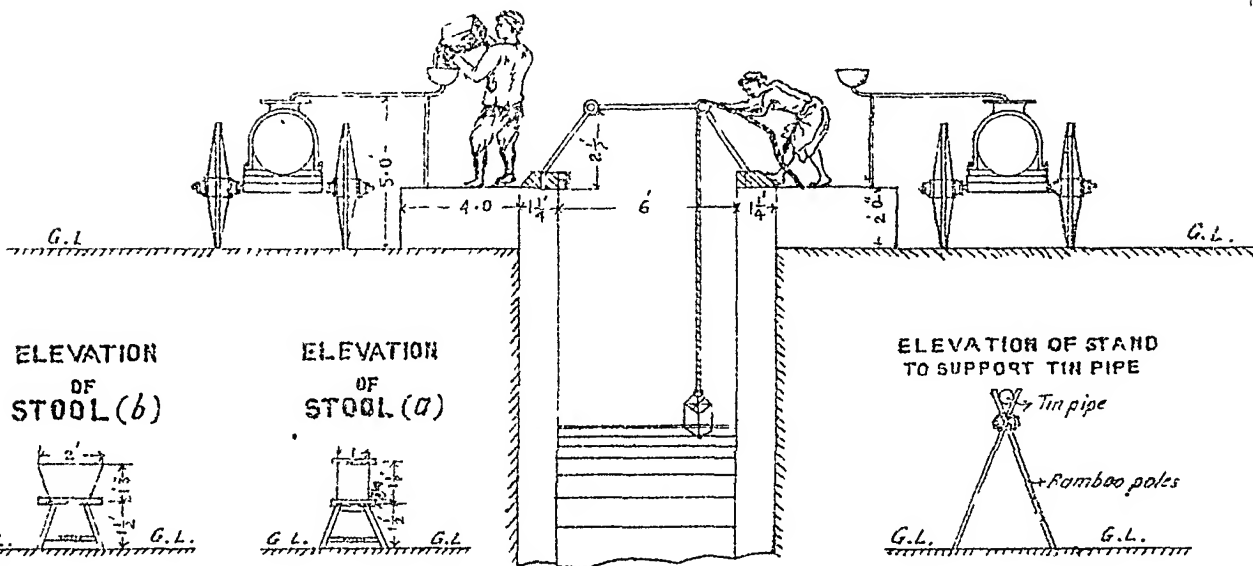
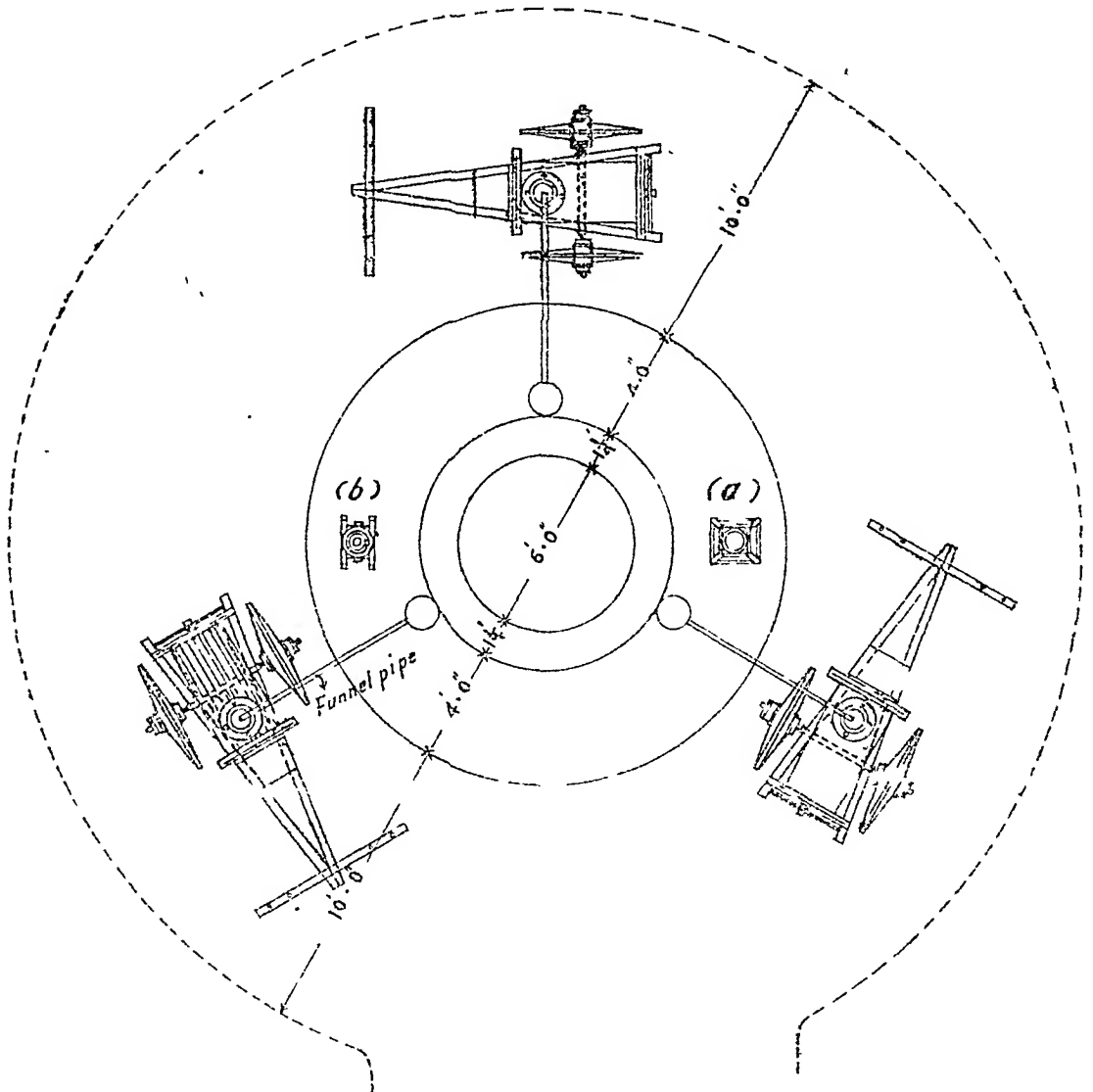
ENLARGED PLAN OF BRUSH



WATER SUPPLY FOR FAMINE RELIEF CAMPS

PLAN SHOWING ARRANGEMENT AT WELLS

Scale 6 Feet = 1 Inch



Note

(a) A stool for holding a small drum filled with $\frac{1}{2}$ " top containing permanganate solution for washing hands before drawing water.

(b) A stool for holding an Iron vessel (gangal) for

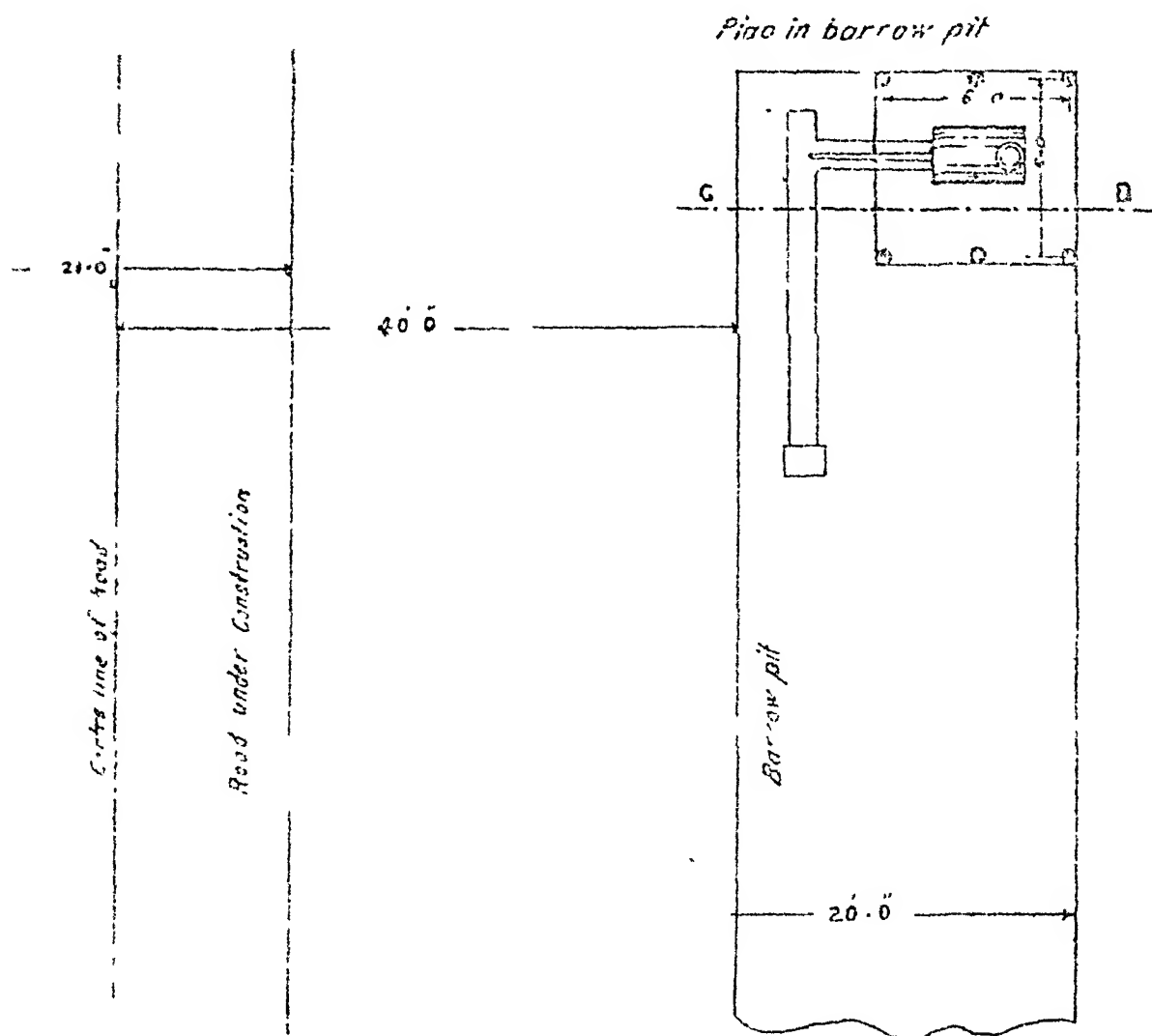
H. B.

(1) Carts with 5'x2' dia barrels will be drawn by bullocks and those with 3'x2' dia barrels by 3 coolies (2 in front & 1 in rear)

(2) Coolies can and

WATER SUPPLY FOR FAMINE RELIEF CAMPS

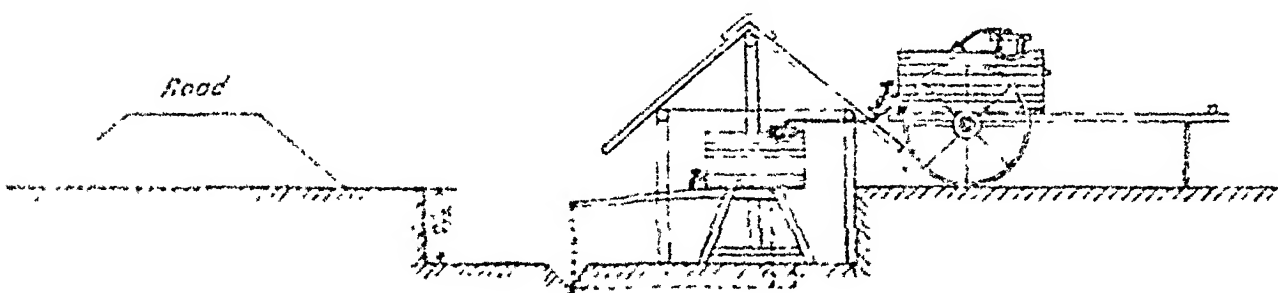
PLAN SHOWING THE ARRANGEMENT OF PIAD AND DELIVERY

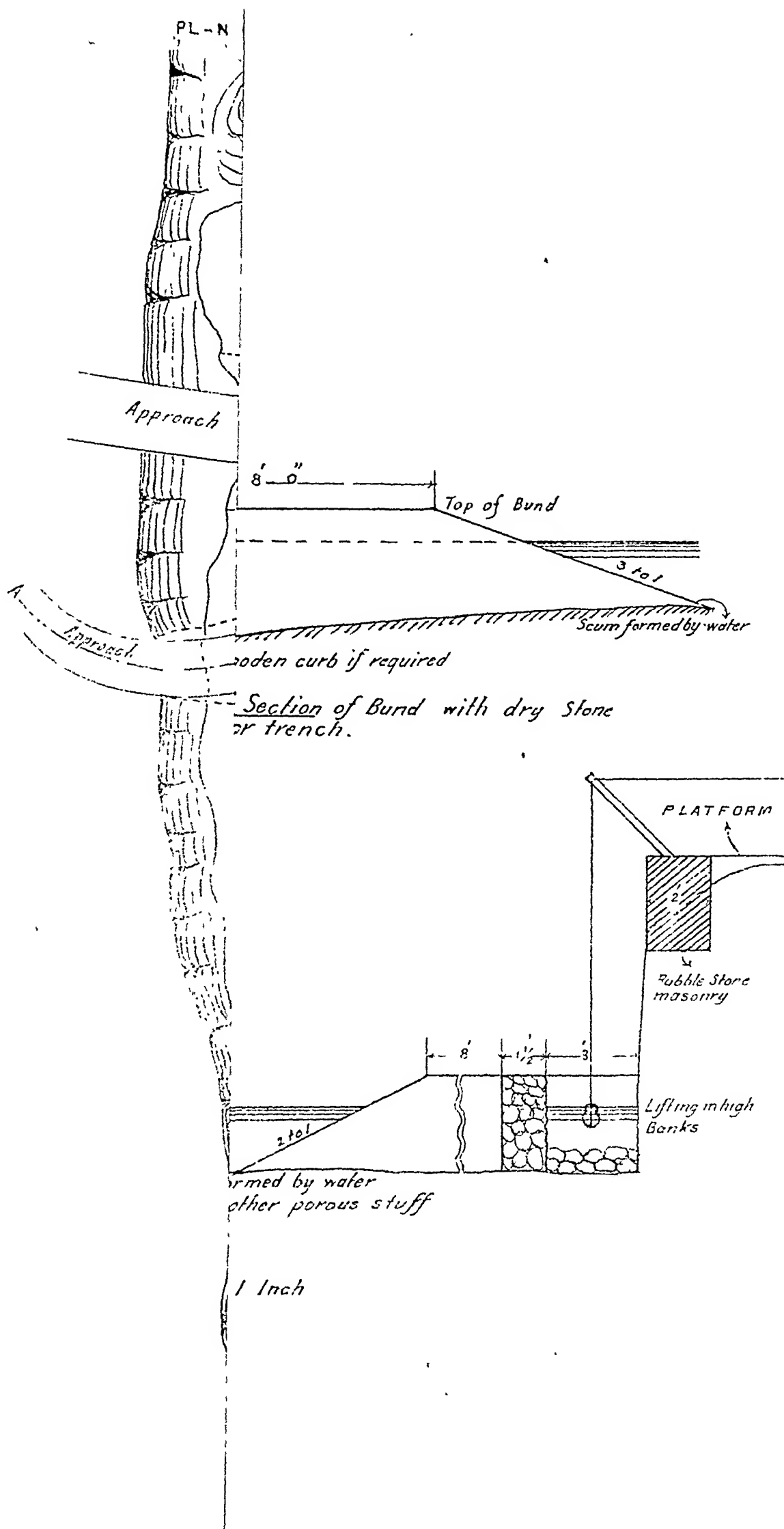


Note

On existing roads borrow pits will serve admirably for the Piao and on new roads a borrow pit may be excavated to the desired depth where necessary and the earth utilized for road embankment.

SECTION ON C.D.





APPENDIX III.

SPECIAL GANGS.

The following distribution for a camp of 4,000 is the result of past experience, and will be found useful as a guide:—

I.—Water-supply.

Establishment for piasos.	For each two gangs one piao is sufficient with one man and one woman at each	... Total	22 men. 22 women.
	Six water-barrel carts will be required if the camp is one of road construction, and one man will be required for each	...	6 men.
	There would probably be about six temporary wells in the nalla bed to be guarded	...	6 "
	For one piao at head-quarters camp	...	2 "
	For four piasos at workers' lines	...	8 "
	Total	...	66
Establishment for Kitchens and Hospital.	For the <i>Kitchen</i> there will be required—Carriers	...	2
	Distributors	...	3
	Total	...	5
	For the <i>Hospital</i> —Carriers	...	2
	1 distributor for each 12 patients	...	1
	Total	...	3
	GRAND TOTAL	...	74

The water-supply gang will thus consist of—

- 1 Mate on pay of "Special" class and 74 men and women on "Class II" pay.

II.—Conservancy.

Guards.	One guard for each 8 gangs	...	5 men.
	For head quarter's camp	...	2 "
	Total	...	7
Sweepers.	For a camp of 4,000 not less than 16 sweepers will be required	...	16 men.

The conservancy gang will therefore consist of—

- 1 Mate Guard on pay of "Special" class.
7 Guards on "Class I" pay.
1 Jamadar Sweeper on Rs. 8 a month.
16 Sweepers at Rs. 6 a month for men and Rs. 5 a month for women.

Sweepers will be paid 8 annas extra for burying a cholera corpse, and 3 annas for a corpse from any other cause.

III.—Hospital.

Two men will be required to assist in distributing medicines	...	...	2
An attendant for each six patients, male	...	...	1
Do. do, female	...	...	1
Total	...	...	4

These 4 will receive "Class II" wages.

IV.—Kitchens.

One cook will suffice for each 150 children. A Gang Muharrir is necessary to keep the attendance register and write up the returns required, and one Warder to keep order.

V.—General.

Four Treasury guards will be necessary at the head-quarter's camp, two for day and two for night. Two Dāk runners will also be needed; one Chaprasi for the Officer-in-charge; one Khalasi for each Work Agent; all these may be on the pay of the "Special" class.

APPENDIX IV.
TABLE OF STANDARD TASKS FOR RELIEF WORKERS.

Nature of work.	Reduced lead.	QUANTITIES IN CUBIC FEET.			Remarks.
		Class I—Diggers.	Class II—Carriers.	Class III—Working children.	

EARTHWORK.		MEASUREMENT BY—			
		Pit.	Bank.		
		Cft.	Cft.		
Soft earth	70	80	...	If the task is measured in the finished bank, 15 per cent. above the pit measurement must be taken.
Hard earth or soft moorum ...	...	48	55	...
Hard moorum ...	...	36	42	...
Very hard moorum ...	...	24	28	...

METAL-BREAKING.		Cft.	Cft.	Cft.	
Hard metal as basalt ...	...	4½	3	½	These tasks are merely given as a guide. The task in each case will have to be fixed with regard to the nature and hardness of the stone dealt with.
Soft metal as sandstone.	...	6	4	½	

CARRIAGE.				Carrier unit 10,000.	Half-carrier unit 5,000.	
Lead in feet.	Lift in feet.					
				Cft.	Cft.	
50	Up to 5 feet.	146	...	68	34	Reduced lead = 36 + Lead + 12 × Lift. The maximum task for a carrier-unit is fixed at 10,000, i. e., 1 cubic foot carried 10,000 ft. The task = $\frac{10,000}{\text{constant}}$. The number of carriers required = $\frac{\text{Reduced lead}}{T \text{ (task for diggers)} \times R \text{ (reduced lead)}}$ = $\frac{10,000 \text{ (constant)}}{T \text{ (task for diggers)}}$ or Carrier task (from Table).
100		196	...	51	25	
150		246	...	41	21	
200		296	...	34	17	
250		346	...	28	14	
300		396	...	25	13	
400	5 to 10 feet.	496	...	20	10	Example— A gang contains 20 diggers working in soft earthwork. Each digger's task is 70 cubic feet (pit measurement). ∴ Task for gang is 20 × 70 = 1,400 cubic feet. The number of carriers required to carry this with a lead of 300 feet and a lift of 10 feet is— $\frac{1,400}{22 \text{ from Table.}} = 66 \text{ say.}$ In making up the number Class III or working children are taken as half-carrier units.
500		596	...	17	8	
50	10 to 15 feet.	206	...	49	25	On the ordinary work on which relief-workers are employed, such as a road in the plains, where the earth is soft and the lift and lead do not exceed 50 and 5 feet, respectively, the number of carriers is usually greatly in excess of actual requirements. A typical gang would contain 20 diggers, 50 carriers and 20 working children, and the digger's task be (70 × 20) = 1,400 cubic feet. The carriers would equal 60 units and would only be doing a task of $\frac{1,400}{60} = 23 \text{ cubic feet instead of } 68 \text{ cubic feet, the full task.}$ Nor would they be doing a full carrier's task till the reduced lead was 426, equal, with a 5-foot lift, to a lead of 330 feet, or with a 10-foot lift to a lead of 270 feet.
100		256	...	39	19	
150		306	...	33	17	
200		356	...	28	14	
250		406	...	25	13	
300		456	...	22	11	
400	15 to 20 feet.	556	...	18	9	On the ordinary work on which relief-workers are employed, such as a road in the plains, where the earth is soft and the lift and lead do not exceed 50 and 5 feet, respectively, the number of carriers is usually greatly in excess of actual requirements. A typical gang would contain 20 diggers, 50 carriers and 20 working children, and the digger's task be (70 × 20) = 1,400 cubic feet. The carriers would equal 60 units and would only be doing a task of $\frac{1,400}{60} = 23 \text{ cubic feet instead of } 68 \text{ cubic feet, the full task.}$ Nor would they be doing a full carrier's task till the reduced lead was 426, equal, with a 5-foot lift, to a lead of 330 feet, or with a 10-foot lift to a lead of 270 feet.
500		656	...	15	8	
50	20 to 25 feet.	266	...	38	19	On the ordinary work on which relief-workers are employed, such as a road in the plains, where the earth is soft and the lift and lead do not exceed 50 and 5 feet, respectively, the number of carriers is usually greatly in excess of actual requirements. A typical gang would contain 20 diggers, 50 carriers and 20 working children, and the digger's task be (70 × 20) = 1,400 cubic feet. The carriers would equal 60 units and would only be doing a task of $\frac{1,400}{60} = 23 \text{ cubic feet instead of } 68 \text{ cubic feet, the full task.}$ Nor would they be doing a full carrier's task till the reduced lead was 426, equal, with a 5-foot lift, to a lead of 330 feet, or with a 10-foot lift to a lead of 270 feet.
100		316	...	32	16	
150		366	...	27	13	
200		416	...	24	12	
250		466	...	21	11	
300		516	...	19	9	
400	25 to 30 feet.	616	...	16	8	On the ordinary work on which relief-workers are employed, such as a road in the plains, where the earth is soft and the lift and lead do not exceed 50 and 5 feet, respectively, the number of carriers is usually greatly in excess of actual requirements. A typical gang would contain 20 diggers, 50 carriers and 20 working children, and the digger's task be (70 × 20) = 1,400 cubic feet. The carriers would equal 60 units and would only be doing a task of $\frac{1,400}{60} = 23 \text{ cubic feet instead of } 68 \text{ cubic feet, the full task.}$ Nor would they be doing a full carrier's task till the reduced lead was 426, equal, with a 5-foot lift, to a lead of 330 feet, or with a 10-foot lift to a lead of 270 feet.
500		716	...	14	7	
50	30 to 35 feet.	326	...	31	15	On the ordinary work on which relief-workers are employed, such as a road in the plains, where the earth is soft and the lift and lead do not exceed 50 and 5 feet, respectively, the number of carriers is usually greatly in excess of actual requirements. A typical gang would contain 20 diggers, 50 carriers and 20 working children, and the digger's task be (70 × 20) = 1,400 cubic feet. The carriers would equal 60 units and would only be doing a task of $\frac{1,400}{60} = 23 \text{ cubic feet instead of } 68 \text{ cubic feet, the full task.}$ Nor would they be doing a full carrier's task till the reduced lead was 426, equal, with a 5-foot lift, to a lead of 330 feet, or with a 10-foot lift to a lead of 270 feet.
100		376	...	27	14	
150		426	...	23	12	
200		476	...	21	11	
250		526	...	19	9	
300		576	...	17	8	
400	35 to 40 feet.	676	...	15	7	On the ordinary work on which relief-workers are employed, such as a road in the plains, where the earth is soft and the lift and lead do not exceed 50 and 5 feet, respectively, the number of carriers is usually greatly in excess of actual requirements. A typical gang would contain 20 diggers, 50 carriers and 20 working children, and the digger's task be (70 × 20) = 1,400 cubic feet. The carriers would equal 60 units and would only be doing a task of $\frac{1,400}{60} = 23 \text{ cubic feet instead of } 68 \text{ cubic feet, the full task.}$ Nor would they be doing a full carrier's task till the reduced lead was 426, equal, with a 5-foot lift, to a lead of 330 feet, or with a 10-foot lift to a lead of 270 feet.
500		776	...	13	6	
50	40 to 45 feet.	386	...	26	13	On the ordinary work on which relief-workers are employed, such as a road in the plains, where the earth is soft and the lift and lead do not exceed 50 and 5 feet, respectively, the number of carriers is usually greatly in excess of actual requirements. A typical gang would contain 20 diggers, 50 carriers and 20 working children, and the digger's task be (70 × 20) = 1,400 cubic feet. The carriers would equal 60 units and would only be doing a task of $\frac{1,400}{60} = 23 \text{ cubic feet instead of } 68 \text{ cubic feet, the full task.}$ Nor would they be doing a full carrier's task till the reduced lead was 426, equal, with a 5-foot lift, to a lead of 330 feet, or with a 10-foot lift to a lead of 270 feet.
100		436	...	23	12	
150		486	...	21	10	
200		536	...	19	9	
250		586	...	17	8	
300		636	...	16	8	
400	45 to 50 feet.	736	...	14	7	On the ordinary work on which relief-workers are employed, such as a road in the plains, where the earth is soft and the lift and lead do not exceed 50 and 5 feet, respectively, the number of carriers is usually greatly in excess of actual requirements. A typical gang would contain 20 diggers, 50 carriers and 20 working children, and the digger's task be (70 × 20) = 1,400 cubic feet. The carriers would equal 60 units and would only be doing a task of $\frac{1,400}{60} = 23 \text{ cubic feet instead of } 68 \text{ cubic feet, the full task.}$ Nor would they be doing a full carrier's task till the reduced lead was 426, equal, with a 5-foot lift, to a lead of 330 feet, or with a 10-foot lift to a lead of 270 feet.
500		836	...	12	6	

APPENDIX V.

THE EXACTION OF A TASK AND THE DUTIES OF GANG MUHARRIRS AND WORK AGENTS.

1. It cannot be too clearly understood that the exaction of a task depends in a great measure on the orderly and methodical arrangement of the relief-workers. All overcrowding must be carefully avoided, and it is better, when a rush of new applicants takes place, to form them into gangs and keep them apart from the workers until such time as the Work Agent can arrange for their employment. An undisciplined crowd should never be allowed to mix with the gangs already on the works; new gangs should remain seated under their appointed mates and should be taken in hand and told off to their work one by one.

2. Whenever a gang is mustered or paid all members must be seated in straight rows in the classes in which they are entered in the register, and it is the Mate's duty to see that this is done quickly and in an orderly manner.

3. A gang working on the Task-work (b) system will consist of not more than 90 members, and an earthwork gang must contain, if possible, a sufficient number of diggers to keep the carriers employed. Each gang will be in charge of a Mate, who will wear a badge with the index number of his gang, and will also be supplied with a flag with the same number on it in large figures.

The Muharrir's charge. Each Muharrir will be in charge of from five to six hundred workers, and
The Work Agent's charge and duties, wherever it is possible a Work Agent will be appointed for every 2,000 workers.

The duties of the Gang Muharrir are set forth in detail below; the Work Agent will confine himself to professional matters and to the orderly arrangement of workers as set forth in separate instructions for earthwork and metal-breaking Camps.

4. The gangs will be re-formed at the beginning of each week, and no newcomers will be allowed into the gang during the week; the numbers will thus either remain constant or will diminish by absentees. All new-comers during the week will be formed into new gangs.

5. Each Muharrir is to be provided with a printed wage list, and the entries on the gang register will depend upon the column in this table on which payments are being made; the Muharrir will then proceed as follows on Task-work charges:—

Early in the morning he musters his gangs on the work as described in paragraph 2, divides them correctly into classes and enters the number of each class; no names are to be called or written; he then fills up the amount column calculated at the highest prescribed rate of wages for each class, on the assumption that the gang will complete their task, and enters the total for workers and gratuitous.

This completes the morning entries in each register.

6. Early in the afternoon he again goes round his gangs and notes if the "work done" on the previous day as entered by Work Agent under that day, corresponds with the task due for that day; if it does not, he calculates the fines from the Mate and Classes I and II, enters the amount, deducts it from the total entered in the morning of the previous day, and writes down the resulting amount opposite the heading "Amount paid for that day."

7. At 3 or 4 o'clock in the afternoon, depending upon the length of the day and the time of the year, the Muharrir applies to the Officer-in-charge for the money to pay his gangs for the previous day and signs for the amount he takes away. On the arrival at each gang he musters them as prescribed each class entered in the register being seated in separate rows and counted, to see that the numbers agree with the entries before payment is commenced.

After payment he signs the register, and takes it with him, returning it to the Mate the first thing next morning.

8. The method of payment will be as follows:—

In the first place a number of bags must be got ready, and on each bag is to be shown a number corresponding to the index number of each gang. From the morning entries of the previous day, as described in paragraph 5, the Muharrir knows exactly the amount which will have to be paid supposing each gang does its full task; he takes a note of these totals in his note-book, which he shows on his return to the Officer-in-charge, and finds that the amount required is between Rs. 7 and Rs. 8 for each gang.

To avoid the delay in counting out the exact number of annas and pice, which is different for each gang, the Officer-in-charge makes up bags containing coppers and small coins of exactly, say, Rs. 8 each, and hands these over to the Muharrir with the index numbers on them corresponding to the gang numbers in charge of the latter.

9. When the Muharrir has made the payments he ties up the balance of the money in the bag pertaining to each gang and returns it to the Officer-in-charge with the gang register, and on his ascertaining that the balance in each bag is the correct difference between the Rs. 8 given out and the entry in the column "Amount paid," he returns the register to the Muharrir.

10. The Muharrir then proceeds to write up his day-book, a sample of which will be supplied to him as a guide, and he will give this in the same evening to the Officer-in-charge, so that that officer may make the entries in his own day-book and from thence into his cash-book.

11. If the charge is being worked on the "Intermediate" system, the exact meaning of which will be described elsewhere, the forms and the procedure will be exactly the same up to the morning entries, but there will be no dependants, as these will be provided for elsewhere. The gangs in this case will be smaller and contain from 20 to 30 workers, as far as possible from one village.

Instead however of fines from individuals being calculated and deducted, it will be ascertained by the nearest simple one-eighth fraction what proportion the task done bears to that due, and deductions on account of short work, if any, will be made from the wages of each class of workers except the working children according to the following table:—

Table showing the wages due for "short work" under the Intermediate System.

Full wages in pice.	Wages in Pice for short work.							Remarks.
	Proportion of work done to task set.							
	$\frac{1}{8}$	$\frac{1}{4}$	$\frac{3}{8}$	$\frac{1}{2}$	$\frac{5}{8}$	$\frac{3}{4}$	$\frac{7}{8}$	
4	1	1	1	2	2	3	3	<p>1. The Garg Muharrir simply musters the workers in the morning without calculating the wages.</p> <p>2. The Work Agent in measuring up the work done on the <i>previous</i> day notes the proportion of work done to task set.</p> <p>3. Guided by this "proportion," which must invariably be expressed in the simple one-eighth fractions, the Gang Muharrir calculates the wages to be paid according to this table in the afternoon and pays the gang accordingly.</p> <p>4. The working children are not to be fined.</p>
5	1	1	2	2	3	4	4	
6	1	1	2	3	4	4	5	
7	1	2	3	3	4	5	6	
8	1	2	3	4	5	6	7	
9	1	2	3	4	6	7	8	
10	1	2	4	5	6	7	9	
11	1	3	4	5	7	8	10	
12	1	3	4	6	7	9	10	
13	1	3	5	6	8	10	11	
14	2	3	5	7	9	10	12	
15	2	4	6	7	9	11	13	
16	2	4	6	8	10	12	14	
17	2	4	6	8	10	13	15	

12. Payments in this case will not however be made to each individual member of the gang, but the total due will be paid over in a lump sum to the head-man of the gang for distribution; each class of workers should, however, be distinctly told what wages they are to get.

Payments to one head-man.

The Head-man.

The Head-man or Mate will in this case be selected by the members of the gang, and as far as possible, the gang will be composed of members of one or two villages

13. The Work Agent's duty each morning is (i) to calculate the task correctly and to set out the work to be done for that day, and to see that all workers are arranged in a manner calculated to ensure a proper task being performed; (ii) to measure up the task performed on the *previous* day and enter the result in the gang register under *that* day (*vide* paragraph 6); (iii) in the case of Task-work gangs, to assess fines for short work if any; and (iv) in the case of intermediate workers, to enter on the appropriate line the nearest simple fraction representing the proportion of work done to task set.

Work Agent's duties.

14. The general principal to be remembered is that (a) the number of workers, (b) the task set, (c) the task performed, (d) the deficiency of work done and fines inflicted, if any, and (e) the payments made for any one day should all be entered under the same day in the appropriate columns. Particulars relating to one day must not be mixed up with those relating to another.

15. The procedure then will be as follows, supposing the opening day of camp to be Sunday, which is the most convenient day for opening a camp:—

Day of the week.	Remarks.
	<i>Opening day of camp.</i>
Sunday	... Classify workers, and form gangs. (N. B.—No measurements, no payments, <i>vide</i> General Order, paragraph 33.)
Monday	... <i>Morning</i> .—Muster the gangs as formed on Sunday, and enter under Monday. Set out task for Monday and enter task due under Monday. <i>Evening</i> .—Pay Sunday wages and enter under Sunday.
Tuesday	... <i>Morning</i> .—Muster the gangs under Tuesday; set out task for Tuesday and enter task due under Tuesday. Measure up task performed on Monday and enter under Monday, noting at the same time deficiency, if any, in the case of Task-work and proportion of work done to task set in the case of Intermediate gangs. <i>Evening</i> .—Inflict fines, if any, and pay up gangs for Monday's work on actual measurements, and complete register for Monday. (N. B.—1. Do not fill up depleted gangs. Newcomers* go to the kitchen or are formed into fresh gangs and sent to the works. 2. Until the newcomers are sufficiently numerous to be formed into regular gangs, they should be employed on miscellaneous works, e. g., side-tracks, cleaning jungle, finishing off work done by the regular gangs, &c., and kept quite separate from the old gangs. When they increase to a sufficient number, form them into fresh regular gangs and set them proper tasks in the usual manner.)
Wednesday	... As above, complete register for Tuesday.
Thursday	... " " " for Wednesday.
Friday	... " " " for Thursday.
Saturday	... " " " for Friday.
Sunday	... <i>Morning</i> .—Measure up work done on Saturday and pay the gangs, entering all payments and measurements, &c., under Saturday, thus completing the register for week ending Saturday. Close work. Let the workers have a holiday. Compile weekly and other returns and submit those that are due. <i>Evening</i> .—Re-form gangs and make up depleted gangs to full strength. As far as possible have old hands and newcomers in separate gangs. Then under Sunday complete all entries for Sunday for those of the old hands who are entitled to the Sunday wages, <i>viz.</i> , those who have been on the work at least 3 days in the preceding week.
Monday	... <i>Morning</i> .—Muster the gangs under Monday as re-formed on Sunday evening. Set out the task for Monday and enter task due under Monday. <i>Evening</i> .—Pay all old hands their Sunday wages and enter under Sunday. No measurements on this day.
Tuesday onwards	... Proceed as indicated above.

* The procedure as regards newcomers will be as follows:—

- (a) Suppose A comes on Tuesday, A will get a kitchen ration on Tuesday, if in need of it,
- (b) On Wednesday, A will work, but will not be paid; he will again, if in need of it, get a kitchen ration.
- (c) On Thursday, A will be paid for Wednesday's work, and so on.

APPENDIX VI.

NEW ROAD CONSTRUCTION—EARTHWORK.

In order to avoid all crowding, each gang, which will contain not more than 90 workers, will be spaced for chains apart, and will complete the work in this length before being moved on.

2. No excavation is to commence until the centre line (c), the outside pit lines (a) and (e), inside pit lines (b) and (d), and the 20-feet spaces between the pits have all been nicked out on the ground. The standard dimensions, which must be strictly adhered to, are all shown on the accompanying sketch. The roadway will have a formation width of 21 feet in bank and cutting.

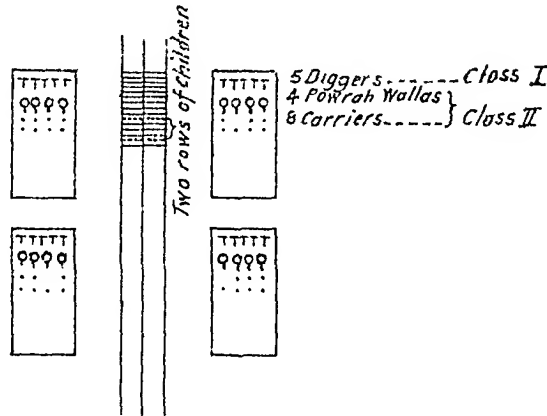
3. No excavation is to be made except from the regular pits or nearer than 40 feet from the centre line of the road. The pits should be taken out for an even depth of one foot, and can then be deepened if more earth is required

4. If a gang contained—

20 Class I diggers, and
50 men and women, } Classes II and III carriers,
14 children, age 8—12 }

or 84 workers in all, a good distribution of work would be as follows:—

5 diggers in each pit	...	...	...	20
4 Class II powrah-wallas	...	...	...	16
8 Class II carriers	...	...	...	32
2 Class II men on road bank directing the carriers	...	...	...	2
14 children breaking clods and dressing bank	...	...	...	14
			Total	84

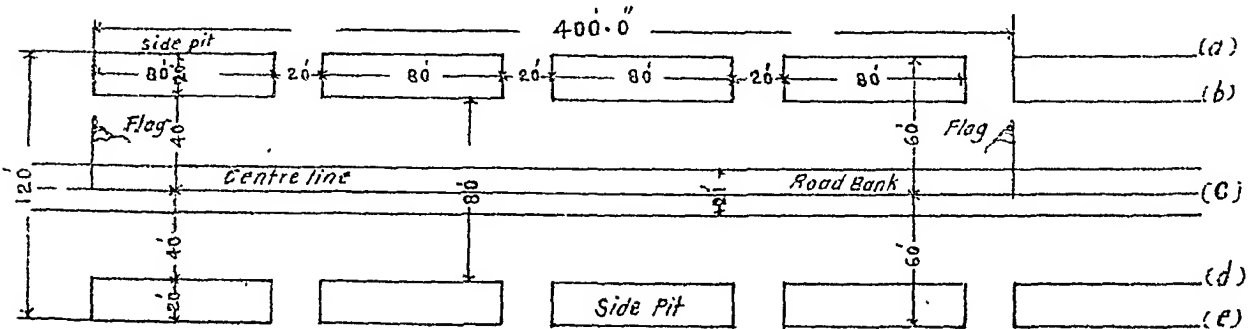


5. The above sketch shows the distribution, and the greatest care must be taken to make a methodical division in each gang, as the tendency of the workers is to crowd together into one pit, in which case the exaction of an adequate task becomes hopeless.

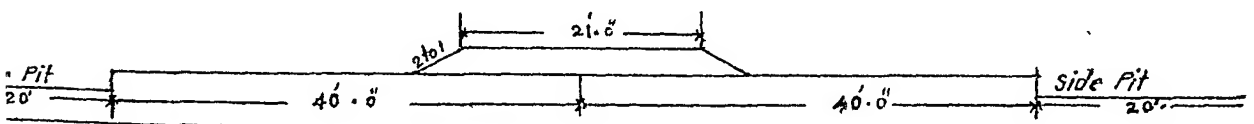
6. These may appear petty matters to set forth in such detail, but it must be remembered that the great majority of Work Agents are without experience, and even very few Sub-Overseers on the Public Works establishment have any ideas of organizing a crowd.

ARRANGEMENT OF SIDE PITS FOR ROAD BANK

SPACE FOR ONE GANG



CROSS SECTION



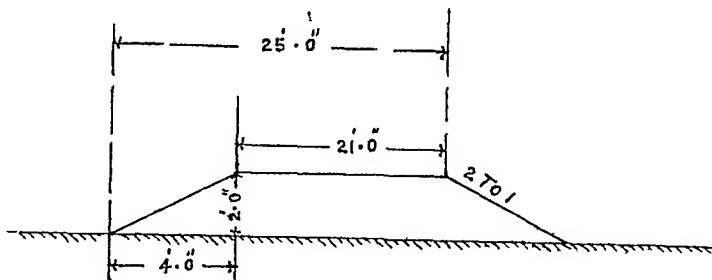
APPENDIX VII.

FAMINE RELIEF WORKS.

Setting out and measurement of Earthwork task.

1. On famine relief-works where measurements have to be made daily it has been found that the only practicable method is to make them from the road bank section, but in this case the task must be taken at 15 per cent. above that for pit excavation, as shown in the table of standard tasks for relief-workers.

As an example, take an ordinary road bank 2 feet high—the section will be $25 \times 2 = 50$ square feet :—



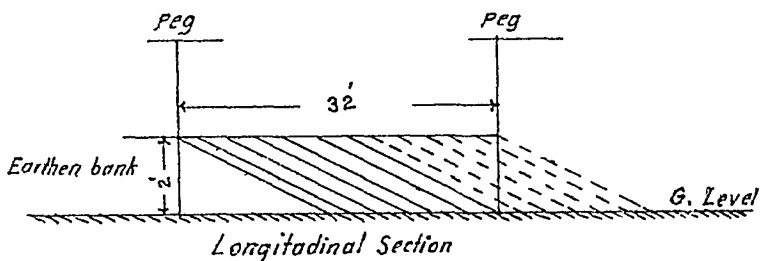
2. If the gang has 20 diggers and the task is 80 cubic feet per head, the total quantity to be done is $20 \times 80 = 1,600$ cubic feet; and as the section in this particular case is 50 square feet, the length of bank which represents the task will be $\frac{1,600}{50} = 32$ running feet

Calculation of the task.

3. The above calculations are made daily by the Work Agent for each gang, and a long bamboo peg is set up to show the length of bank to be done. It is advisable at the same time to nick a line on the ground at the peg, as it is otherwise liable to be altered. By marking the length of the task out in this way the gang can understand exactly what is expected of them. The Mates must be made to understand that the bank must be carried on in rough section at the full height, thus :—

Setting out the task.

the length of the task out in this way the gang can understand exactly what is expected of them. The Mates must be made to understand that the bank must be carried on in rough section at the full height, thus :—



APPENDIX VIII.

FAMINE RELIEF WORKS.

THE ARRANGEMENT OF GANGS IN METAL-BREAKING CAMPS AND THE SETTING OUT AND MEASUREMENT OF THE TASK.

Metal-breaking camps.

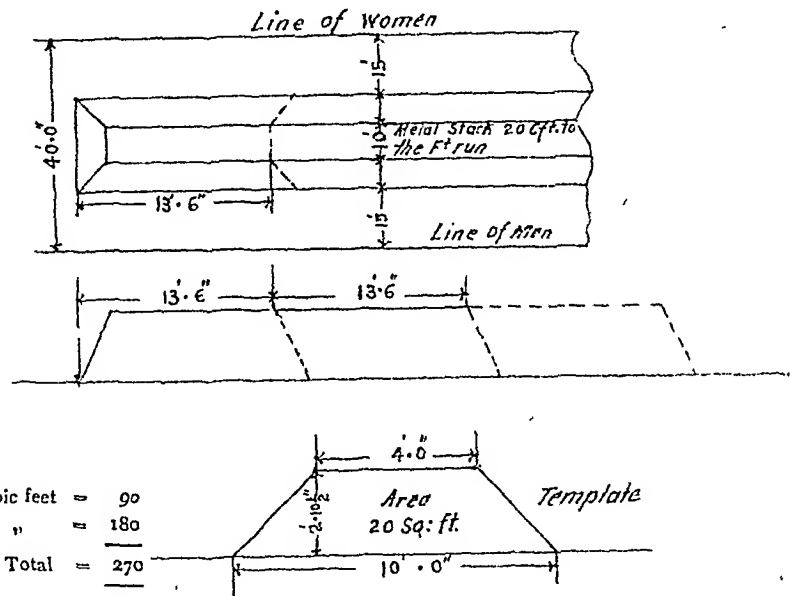
1. There are two kinds of metal-breaking camps :

- (i) where metal is broken at the quarry ;
- (ii) at the road-side.

The latter are preferable wherever rubble can be collected in sufficient quantities.

Quarry camps.
Arrangement of workers and size of template.

2. When the camp is at a quarry, the men and women breakers are to be seated in two rows opposite each other at a distance of 40 feet apart, and between them is the metal stack, having a capacity of 20 cubic feet to the foot run.



TASK.—20 Class I @ $4\frac{1}{2}$ cubic feet = 90
 60 Class II @ 3 " = 180
 Total = 270

All children are employed in carrying.

Length of Task $\frac{270}{20} = 13' 6''$.

3. In the example given the task is 270 cubic feet, and as the template area is 20 square feet, the length of the stack to represent the task is 13' 6". This is marked by long bamboo pegs, and lines should also be nicked out on the ground as the pegs are liable to be removed.

Setting out the task.

Stacking the metal.

4. As the metal is broken it is stacked continuously, so that the gang see their work growing before them and know exactly what remains to be done.

Completion of task.

5. The gang may stop work immediately the task set out is finished.

Length of stack.

6. The length of the stack should be arranged to allow of at least 10 days' work for the gang.

Marking out the lines.

7. The lines on which the workers are to be seated as well as the outside edges of the stack should all be nicked out on the ground before work is commenced.

Roadside camps.
Gangs 4 chains apart.

8. When the camp is at the roadside, the gangs are to be spaced 4 chains apart, and all the metal required in this length is to be broken before the gangs move on.

9. The workers are seated, as before, opposite one another, or, if space is not available, facing one way, but they must all be on the same side of the road. The metal as it is broken is carried and stacked in a continuous line for a $4\frac{1}{2}$ " coat on the opposite side of the road.

Workers on one side of the road.
Metal stacked on opposite side.

10. The length of the task is calculated and marked out in exactly the same way as above described; only in this case the standard template is used and the area is $3\frac{3}{4}$ or $3\frac{1}{4}$ square feet.

Task and setting out.

Rubble supply.

11. In both camps suitable arrangements must be made for a sufficient supply of rubble.

APPENDIX IX.

DIRECTIONS FOR TREATMENT OF WELLS WITH PERMANGANATE OF POTASSIUM AS A MEANS OF CHECKING EPIDEMICS OF CHOLERA, BY E. H. HANKIN, Esq., CHEMICAL EXAMINER AND BACTERIOLOGIST, NORTH-WESTERN PROVINCES AND OUDH.

Permanganate of potassium is a crystalline salt-like substance, of a purple colour, in whose preparation only mineral substances are employed. Hence its use in wells need not be objected to by the strictest Hindu.

Put one or two ounces of the solid substance into a *dol* or bucket that has been filled with water drawn from the well about to be treated. Stir it up, and pour the red solution thus produced into the well, leaving the portion of permanganate that is not yet dissolved at the bottom of the *dol*. Lower the *dol* into the well, fill it with water, draw it up, pour back the water as before. Repeat the process till all the permanganate has been dissolved. After half-an-hour draw up some of the water and examine it. If a red colour is still present, enough has been added. If the red colour has disappeared then more permanganate should be added to the water in the well. In all cases enough permanganate should be added to produce a faint-red colour lasting for 24 hours.

If the water in the well is bad, more permanganate will be necessary. In such a case it will be found that the strong red colour at first produced quickly changes to brown and then fades away. This is because the permanganate destroys dirt and is destroyed by it. Therefore if the water in the well is clean, a smaller quantity of permanganate will be necessary. From one to four ounces of permanganate will be found to be enough for ordinary wells. If more permanganate is added than is enough to produce a faint permanent red colour, it is likely that frogs that may be in the well will be killed. This will in a few days give the water a putrid taste. If the quantity of permanganate is not enough to produce a faint permanent red colour, it is not likely to do any good. If possible, the permanganate should be added at night in order to leave the wells undisturbed as long as possible. The water will be fit to drink on the following morning. If on the following morning a red colour is still present, the water may have an unpleasant taste, but it is perfectly harmless. If the inhabitants do not like the taste, they should be instructed to pump out the water until the colour vanishes. Always care should be taken to treat with permanganate all the wells in the place, not only those used for drinking, but also those used for washing purposes. Care should be taken to explain to the inhabitants the reason of using permanganate, and they should be warned against using water from other sources that have not been treated. If one well is required for immediate use, perhaps it would be advisable to add to it a quantity of permanganate and to employ *bhishtis* to draw out the water until the colour has disappeared, but this well should again be treated with permanganate on the following day when the other treated wells are brought into use.

Usually water is kept stored in the houses for washing or other purposes in *gharas*, &c. This should be poured away and, if possible, the inhabitants should be persuaded to wash out their *lotas* and other vessels with water containing permanganate. Unless this is done, isolated cases of cholera are likely to occur even four or five days after the treatment of the wells. I have had experience of a case in which a woman was attacked with cholera after treatment of wells, because she was frightened of touching the red water in the well, and drank water that had been stored in the house and that had been taken from the well before the addition of the permanganate.

SIMPLE METHODS OF STERILIZING WATER AND STORING IT FOR DRINKING PURPOSES

In reply to your No. 4-229, dated the 8th instant, I have the honour to state that I consider boiling the simplest and most reliable method of sterilizing water for drinking purposes, and the addition of about 6 grains of alum to the gallon the readiest means of precipitating suspended matter. To carry out these measures effectively, the alum should be added in the morning and the cleared water drawn off and heated in the evening, being kept at boiling point for at least ten minutes. After cooling down during the night, it is ready for issue the following morning. The best method of storing it is in locked galvanized iron drums provided with taps, and it should be carried to the fields in kerosine tins.

2. When boiling is impracticable, Condry's fluid should be added until the water acquires a permanently slight pink tint.

* * * * *

APPENDIX X.

FORM OF APPOINTMENT OF A MEMBER OF THE WORK ESTABLISHMENT.

(To be prepared and signed in triplicate, one copy to be given to the person appointed, one copy to be transmitted to the Examiner, Public Works Accounts, and one copy to be recorded in the office of the authority making the appointment.)

FROM

THE DIVISIONAL ENGINEER,

Public Works Department,

To

No. _____

Dated at _____, the _____ of _____ 190 .

Under sanction conveyed in _____ you are hereby appointed a member of the Work Establishment of the _____ Division, Public Works Department, in the Central Provinces, as a _____ on a consolidated salary of Rupees (_____) _____ per month with effect from the morning of the day you enter upon your duties under the District Sub-Divisional Officer of _____ to whom you should report yourself without delay.

2. Your appointment will cease on receipt of a written notice from the District Sub-Divisional Officer. If he considers your conduct and work have been satisfactory, he is empowered to then pay you a sum equivalent to your salary for ten to fourteen days in lieu of travelling allowance to enable you to return home. This cannot be claimed as a right.

3. You are liable to summary dismissal at any time without notice for serious misconduct or incompetence proved to the satisfaction of the District Sub-Divisional Officer.

4. Should it be desirable to retain your services after the cessation of the work or works on which you were engaged, you will be placed in charge of such works by the District Sub-Divisional Officer.

5. While in Government employ you will be subject to and governed by the rules for the time being in force in the Public Works Department, supplemented by such other orders as you may from time to time receive from the officer under whom you are serving.

6. * Your salary is consolidated and includes all charges, and you will not be entitled to any travelling or other allowances.

7. This appointment is cancelled should you fail to join by _____

Divisional Engineer.

(DECLARATION BY PERSON APPOINTED.)

I hereby accept the appointment conferred on me in the above order, the terms of which I clearly understand and agree to; and I hereby bind myself to observe and abide by the rules referred to in paragraph 5 of the said order.

(Signature) _____

Dated at _____, the _____ of _____ 190 .

* Executive Engineers are authorized to amend this paragraph when the grant of travelling or other allowances has been sanctioned by competent authority, vide Circular No. F. 7—D, dated the 3rd April 1900.

APPENDIX XI-a.

Instructions for filling in.

FIELD ACCOUNTS FORM NO. 1.

As soon as the Officer-in-charge has the necessary number of persons available, he will form them into a gang, give the gang a distinguishing number, appoint a Mate, decide on the nature of the work they are to be employed on, and allot the gang to a Gang Muharrir; filling in the form as shown.

The Mate will then be told to apply to the Tools Muharrir for the tools for his gang. The Tools Muharrir will look at the composition of the gang and the work they are to be employed upon, and will then issue the necessary tools entering the number of each kind issued. The Mate is then responsible for the custody of the tools shown in the list.

(a) INTERMEDIATE.

1. Specimen Gang Register as filled up in the morning by the Gang Muharrir for a gang consisting of workers only, working on the Intermediate or Task-work system without a minimum.

On this system the gang consists of from 20 to 30 able-bodied workers only, dependants, if any, being fed in the kitchen, and the weakly being employed in separate gangs for feeble persons working on the Task-work system (b).

There will therefore be no entries below *Total workers* made in the morning, with the exception of *Task due*. In other respects the entries are made exactly as for task-work, that is, at the full rate of wage in force, on the assumption that the gang will do the full task.

2. On the Intermediate system the gang is treated as one body. The gang elects its own Head-man or Mate, and whatever sum may be due to the gang is handed to him for distribution. Individual payments are not made.

Gang No. 13. Mate—Bhola.

Nature of work—Earthwork.

Full strength as made up on 10th December 1899.

Workers.

Class.				No.
Special	...	...	...	1
I	{ Men	...	...	7
	{ Women	...	...	...
II	{ Men	...	...	3
	{ Women	...	...	10
III	Working children	...	...	6

Dependants.

			On works.	In kitchens.
IV	Adults	...	...	1
V	{ (a) Children over 8	...	...	1
	{ (b) Do. under 8	...	...	3

KESHEO RAO,

Gang Muharrir.

Tools.

				No.
Pickaxes	...	...	...	8
Phouras	...	...	...	4
Crowbars	...	...	...	...
Sledge hammers	...	...	...	...
Hand do.	...	...	...	...
Baskets	...	...	...	20
Bamboos and flags	...	...	...	8
Pegs	...	...	...	10
Templates, large	...	...	...	...
Do., small	...	...	...	...
Mates' badges	...	...	...	...

YESHWANT RAO,

Tools Muharrir.

APPENDIX XI-b.

Instructions for filling in.

As soon as the Officer-in-charge has the necessary number of persons available, he will form them into a gang, give the gang a distinguishing number, appoint a Mate, decide on the nature of the work they are to be employed on, and allot the gang to a Gang Muharrir; filling in the form as shown.

The Mate will then be told to go to the Tools Muharrir for the tools for his gang. The Tools Muharrir will look at the composition of the gang and the work they are to be employed upon, and will then issue the necessary tools, entering the numbers of each kind issued. The Mate is then responsible for the custody of the tools shown in the list.

(b) TASK-WORK.

Specimen Gang Register, as filled up in the morning by the Gang Muharrir, for a gang of 85 persons working on system (a) or Task-work.

Entries are given opposite *Gratuitous* as a guide for filling up the form. It must be understood that as a rule there would be no entries under this heading, except for babes at the breast: all dependants, both adults and children, with the above exception, would be fed in the kitchen and would not receive a cash dole.

FIELD ACCOUNTS FORM No. I.
Gang No. 2. Mate—Bhapoo.
Nature of work—Metal-breaking.
Full strength as made up on 10th December 1899.

Class.	Workers.			No.
Special	3
I { Men	0
Women
II { Men	5
Women	35
III Working children	15

		Dependants.	
		On works.	In kitchens.
IV Adults	...	...	7
V { Children over 8	...	...	2
Do. under 8	...	2	13

KESHEO RAO,
Gang Muharrir.

			Tools.	No
Pickaxes	6
Phouras
Crowbars	2
Sledge hammers	60
Hand hammers	20
Baskets	8
Bamboos and flags	10
Pegs
Templates, large
Do. small	2
Mates' badges	1

YESHWANT RAO,
Tools Muharrir.

WAGES READY-RECKONER,

Table showing the wages due for "short work" under the Intermediate System, in pice.

Full wages in Pice.	WAGES FOR SHORT WORK IN PICE.							Full wages in Pice.	REMARKS.
	PROPORTION OF WORK DONE TO TASK SET.								
	$\frac{1}{8}$	$\frac{1}{4}$	$\frac{1}{2}$	$\frac{3}{4}$	$\frac{5}{8}$	$\frac{7}{8}$	1		
4	1	1	1	2	2	3	3	4	1. The Gang Muharrir musters the workers in the morning.
5	1	1	2	2	3	4	4	5	2. The Work Agent, in measuring up the work done on the <i>previous</i> day, notes the proportion of work done to task set.
6	1	1	2	3	4	4	5	6	3. Guided by this 'proportion,' which must invariably be expressed by the simple one-eighth fractions, the Gang Muharrir calculates the wages to be paid according to this table in the afternoon and pays the gang accordingly.
7	1	2	3	3	4	5	6	7	4. The working children are not to be fined.
8	1	2	3	4	5	6	7	8	
9	1	2	3	4	6	7	8	9	
10	1	2	4	5	6	7	9	10	
11	1	3	4	5	7	8	10	11	
12	1	3	4	6	7	9	10	12	
13	1	3	5	6	8	10	11	13	
14	2	3	5	7	9	10	12	14	
15	2	4	6	7	9	11	13	15	
16	2	4	6	8	10	12	14	16	
17	2	4	6	8	10	13	15	17	

ITEMS.		DAY AND DATE.	BAZAR DAY, SUNDAY, 10th December.				MONDAY, 11th December.				TUESDAY, 12th December.				WEDNESDAY, 13th December.				THURSDAY, 14th December.				FRIDAY, 15th December.				SATURDAY, 16th December.											
Class.	Description.	Wages in Pice.	NUMBER.			Amount.	NUMBER.			Amount.	NUMBER.			Amount.	NUMBER.			Amount.	NUMBER.			Amount.	NUMBER.			Amount.												
			Men.	Women.	Children.		Men.	Women.	Children.		Men.	Women.	Children.		Men.	Women.	Children.		Men.	Women.	Children.		Men.	Women.	Children.		Men.	Women.	Children.									
WORKERS.	Special.	...	1	...	...	Rs. a. p. at 7 pice. 0 1 9	1	...	...	Rs. a. p. 0 2 6	1	...	...	Rs. a. p. 0 2 6	1	...	...	Rs. a. p. 0 2 6	1	...	...	Rs. a. p. 0 2 6	1	...	...	Rs. a. p. 0 2 6
	I Diggers	...	20	...	...	at 5 pice. 1 9 0	20	...	...	2 8 0	20	...	...	2 8 0	19	...	...	2 6 0	19	...	...	2 6 0	19	...	...	2 6 0
	II Carriers	...	5	35	...	40	...	...	...	3 12 0	5	35	...	40	...	...	...	3 10 6	5	34	...	39	...	...	3 10 6					
	III Working children 8 to 12 years	...	3	...	...	...	0 11 3	...	...	...	0 11 3	...	...	...	0 11 3	...	...	...	0 10 6	...	...	...	14	...	...	0 10 6
Total Workers			26	35	15	76	5	80	...	7	1	9	26	35	15	76	7	1	9	25	34	14	73	6	13	9												
GRATUITOUS.			I V Adults			...	7	...	...	0 8 9	7	...	...	0 8 9	7	...	...	0 8 9	7	...	...	0 8 9	7	...	...	0 8 9		
V Children— (a) Over 8 years (b) Under 8 years			...	2	...	0 1 0	...	...	...	0 1 0	...	...	...	0 1 0	...	...	...	0 0 6	...	...	...	0 0 6	...	...	...	0 0 6
Total Gratuitous			9	...	...	0 9 9	9	...	...	0 9 9	9	...	...	0 9 9	8	...	...	0 9 3	8	...	...	0 9 3	8	...	...	0 9 3
Total all Classes			85	...	...	6 1 9	85	...	...	7 11 6	85	...	...	7 11 6	81	...	...	7 6 9	81	...	...	7 6 9	81	...	...	7 6 9
Final—to be recovered from Special and Classes I and II only			...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Amount paid			...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Signature of Mubarrir																																						
Task—Metal-breaking—Hard stone																																						
Due per unit Class I 4½ cft. } Due																																						
" " " Class II 3 cft. }																																						
" " " Class III 1 cft. }																																						
Task performed																																						
Deficiency																																						
Signature of Work Agent																																						
			310 cft.												303½ cft.												303½ cft.											

AMENDED.

APPENDIX XI-c.

Instructions for filling in.

FIELD ACCOUNTS FORM No. I.

As soon as the Officer-in-charge has the necessary number of persons available, he will form them into a gang, give the gang a distinguishing number, appoint a Mate, decide on the nature of the work they are to be employed on, and allot the gang to a Gang Muharrir, filling in the form as shown.

Gang No. 13. Mate—Bhola.

Nature of work—Earthwork.

The Mate will then be told to apply to the Tools Muharrir for the tools for his gang. The Tools Muharrir will look at the composition of the gang and the work they are to be employed upon, and will then issue the necessary tools, entering the numbers of each kind issued. The Mate is then responsible for the custody of the tools shown in the list.

Full strength as made up on 10th December 1899.

Workers.

(a) INTERMEDIATE.

Specimen Gang Register as completed in the evening by the Gang Muharrir and Work Agent :—

Payment-by-results :—The Work Agent measures up the work done on the previous working day and enters it opposite *Task performed*, calculates the ratio that the work done bears to the task due, and enters this opposite *Proportion of work done to task set*. This should always be expressed in the nearest simple one-eighth fraction, viz., $\frac{1}{8}$, $\frac{1}{4}$, $\frac{3}{8}$, $\frac{1}{2}$, $\frac{5}{8}$, $\frac{3}{4}$ and $\frac{7}{8}$, to facilitate calculation.

The Gang Muharrir, when he comes to pay the gang, notes the proportion as entered by the Work Agent, and calculates the wages according to the table in the margin and hands over the total amount to the Mate for distribution to his gang.

Example.—Tuesday, the 7th November.

Task for gang 640 cft. by bank measurement.
Work actually done by gang 427 cft. Proportion of work done to task set, say $\frac{3}{8}$. The Muharrir calculates the wages on the $\frac{3}{8}$ basis as given in the marginal table and pays Rs. 1-6-9 to the Mate for distribution to his gang.

Class.	No.
Special ...	1
I { (a) Quarrymen, &c. ...	7
(b) Gang Mates ...	...
II { Men ...	3
Women ...	10
III Working children ...	6

Dependants.

	On works	In kitchens.
IV Adults	1
V { (a) Children over 8	1
(b) Do. under 8	3

KESHAO RAO,

Gang Muharrir.

Tools.

	No.
Pickaxes ...	8
Phouras ..	4
Crowbars ...	...
Sledge hammers ...	...
Hand hammers ...	...
Baskets ...	20
Bamboos and flag ...	8
Pegs ...	10
Templates, large ...	..
Do., small ...	...
Mates' Badges ...	1

YESHWANT RAO,

Tools Muharrir.

APPENDIX XI.c.
GANG REGISTER NO I.
FIELD ACCOUNTS FORM No I.

Work on which employed—Earthwork.
System—(a) Intermediate.

Wages based on 12 seers of Grain per Rupee.

[illegible]

Instructions for filling in

As soon as the Officer-in-charge has the necessary number of persons available, he will form them into a gang, give the gang a distinguishing number, appoint a Mate, decide on the nature of the work they are to be employed on, and allot the gang to a Gang Muharrir, filling in the form as shown.

The Mate will then be told to go to the Tools Muharrir for the tools for his gang. The Tools Muharrir will look at the composition of the gang and the work they are to be employed upon, and will then issue the necessary tools, entering the numbers of each kind issued. The Mate is then responsible for the custody of the tools shown in the list.

(b) TASK-WORK.

Specimen Gang Register fully filled up for a gang working on system (b) or Task-work. Under the system, fines for short work may be imposed in the following manner:—

- (1) For short work diggers may be paid at the carrier's rate;
- (2) For persistent short work diggers may be paid at the minimum rate;
- (3) For short work carriers may be paid at the minimum rate;
- (4) Fines under clauses (2) and (3) above may not be imposed more than twice a week without the sanction of the Famine Works Superintendent;
- (5) The Famine Works Superintendent may for persistent short work, fine diggers and carriers down to a pice below the minimum. *Provided that* no worker shall be fined down to or below the minimum more than three times a week;
- (6) Cases of combination to resist authority should be reported to the Divisional Officer and be dealt with by him specially;
- (7) No fines may be imposed on children below 12 or on non-workers.

Examples—

- (a) Short work—mate paid digger's wage, digger carrier's wage, and carrier the minimum wage.
-) Persistent short work—Mate gets 2 pice more than minimum wage and Classes I and II are both reduced to minimum wage.
-) Maximum fine for carriers has already been imposed twice this week and cannot be imposed oftener without special orders from the Executive Engineer. Therefore reduce mate to digger's wage and diggers to carrier's wage only.

APPENDIX XI-d.**FIELD ACCOUNTS FORM NO. I.**

Gang No 2. Mate—Bhapoo.

Nature of work—Metal-breaking.

Full strength as made up on 10th December 1899.

Workers.

Class.		No.
Special	...	1
I { Men	...	20
{ Women	...	...
II { Men	...	5
{ Women	...	35
III Working children	...	15

Dependants.

	On work.	In kitchen.
IV Adults	...	7
V { Children over 8	...	2
{ Do. under 8	.. 2	13

KESHEO RAO,

Gang Muharrir.

Tools.

	No.
Pickaxes ...	...
Phouras ...	6
Crowbars ...	...
Sledge hammers	2
Hand hammers	60
Baskets ...	20
Bamboos and flags	8
Pegs ...	10
Templates, large	...
Do., small	2
Mates' badges	1

YESHWANT RAO,

Tools Muharrir.

Gang No. 2.

Mate—Bhapoo.

APPENDIX XI-d.

GANG REGISTER No. I.

FIELD ACCOUNTS No. I.

Wages based on 9½ seers of Grain per Ruper.

Work on which employed—Metal-breaking.
System—(b) Task-work.

ITEMS.	DAY AND DATE.	Bazar Day, SUNDAY, 10th December.			MONDAY, 11th December.			TUESDAY, 12th December.			WEDNESDAY, 13th December.			THURSDAY, 14th December.			FRIDAY, 15th December.			SATURDAY, 16th December.		
		Number.			Number.			Number.			Number.			Number.			Number.			Number.		
Class.	Description.	Men.	Women.	Children.	Men.	Women.	Children.	Men.	Women.	Children.	Men.	Women.	Children.	Men.	Women.	Children.	Men.	Women.	Children.	Men.	Women.	Children.
		Amount.			Amount.			Amount.			Amount.			Amount.			Amount.			Amount.		
		Total.	Children.	Women.	Total.	Children.	Women.	Total.	Children.	Women.	Total.	Children.	Women.	Total.	Children.	Women.	Total.	Children.	Women.	Total.	Children.	Women.
Spec. clai.	Mates, &c.	Rs. a. p.	at 7 pice, 0 1 9	1	Rs. a. p.	at 7 pice, 0 1 9	1	Rs. a. p.	at 7 pice, 0 1 9	1	Rs. a. p.	at 7 pice, 0 1 9	1	Rs. a. p.	at 7 pice, 0 1 9	1	Rs. a. p.	at 7 pice, 0 1 9	1	Rs. a. p.	at 7 pice, 0 1 9	1
I	Diggers	8	20	...	8	20	...	8	20	...	8	20	...	8	20	...	8	20	...	8	20	...
II	Carriers	6	35	...	6	35	...	6	35	...	6	35	...	6	35	...	6	35	...	6	35	...
III	Working children, 8 to 12 years.	3	...	...	3	...	...	3	...	...	3	...	...	3	...	...	3	...	...	3	...	...
	Total Workers	26	35	15	26	35	15	26	35	15	26	35	15	26	35	15	26	35	15	26	35	15
IV	Adults	5	7	...	5	7	...	5	7	...	5	7	...	5	7	...	5	7	...	5	7	...
V	Children— (a) Over 8 years (b) Under 8 "	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	Total Gratuitous	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	Total all Classes	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	First—To be deducted from Special and Classes I and II only	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	Amount paid	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	Signature of Muharrir	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	Task—Metal-breaking—Hard stone	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	Due per unit Class I 4½ cts. } Due. Do. do. II 3 " } Do. do. III " }	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	Task performed	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	Deficiency	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	Signature of Work Agent	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	

APPENDIX XII.

FIELD ACCOUNTS FORM No. II

GANG MUHARRIR'S DAY-BOOK.

Instructions for Filling up the Form.

The entries are taken direct from the Gang Register.

After paying the gang for the day, the Gang Muharrir returns the balance, if any, to the Officer-in-charge; the latter compares the Gang Register entry with the sum said to have been paid by the Muharrir, and returns the Gang Register to the Muharrir.

The Gang Muharrir then proceeds to write up his Day-book from the Gang Register and returns the latter to the Mate. The procedure is the same whether Intermediate or Task-work is in force.

DAY-BOOK OF MUHARRIR KANYA LAL.

Name of work—Metal-breaking, Katol-Kalmeshwar Road, District Nagpur, Charge No. 1, all on Task-work (b).

Date.	WORKERS.										GRATUITOUS.					TOTAL CHARGES.				QUANTITY OF WORK DONE.			
	SPECIAL.		CLASS I.	CLASS II.		CLASS III.	FINE.		AMOUNT PAID.		CLASS IV.	CLASS V.	AMOUNT PAID.		TOTAL CHARGES.		EARTHWORK.	MOORING COSECTION.	METAL-BREAKING.	&c. &c.			
	Quarry Men &c.	Gang Mates.	Men.	Men.	Women.	Children 8 to 14 years	Rs.	a.	p.	Rs.	a.	p.	Rs.	a.	p.	Cft.					Cft.		
																						Adult.	(a) Children over 8. (b) Children under 8 years.	Rs.	a.	p.
10th December.	...	1	23	5	35	15	...	...	...	5	8	0	2	0	9	6	1	9	...	...	...	...
Do. 1	...	1	20	5	35	15	...	...	...	5	8	0	2	0	9	6	1	9	...	...	...	...
Do. 2	...	1	22	10	35	15	...	...	...	6	1	6	1	0	8	0	6	9	...	...	...	...
Do. 3	...	1	20	10	35	15	...	...	...	5	14	3	2	0	7	3	6	5	...	...	...	...
Do. 4	...	1	16	16	42	18	...	...	...	6	11	9	3	0	6	6	7	2	...	...	...	...
Do. 5	...	1	20	15	48	12	...	...	...	7	2	6	3	0	4	9	7	7	...	...	...	...
Do. 6	...	1	20	15	48	12	...	...	...	7	2	6	3	0	4	9	7	7	...	...	...	...
Totals 10th Decem-ber.	...	6	118	61	230	91	36	14	0	13	2	14	0	39	12	0
11th December.	...	1	20	5	35	15	...	...	...	5	13	3	2	0	9	6	7	0	...	...	...	...
Do. 1	...	1	20	5	35	15	...	...	...	5	13	3	2	0	9	6	7	0	...	...	...	...
Do. 2	...	1	20	5	35	15	...	...	...	5	13	3	2	0	9	6	7	0	...	...	...	...
Do. 3	...	1	22	10	35	16	...	...	...	6	7	3	1	0	8	3	15	6	...	...	...	...
Do. 4	...	1	20	10	35	15	...	...	...	7	9	3	2	0	7	3	8	0	...	...	...	...
Do. 5	...	1	16	16	42	18	...	...	...	7	1	6	3	0	6	6	7	7	...	...	...	...
Do. 6	...	1	20	15	48	12	...	...	...	9	2	0	3	0	4	6	9	6	...	...	...	...
Totals 11th Decem-ber.	...	6	118	61	230	91	41	14	0	13	2	14	3	44	12	0

APPENDIX XIII.

FIELD ACCOUNTS FORM No III.

DAY-BOOK OF WAMAN RAO, OFFICER-IN-CHARGE.

Instructions for Filling up the Form.

This Form is nearly the same as Form No. II, but records workers on Intermediate and Task-work separately, and is filled up nearly in the same way. The difference being that while the Muharrir's Day-book (Form No. II) brings together the entries in all the Gang Registers, the Officer-in-charge's Day-book brings together all the entries in the Day-books of Muharrirs, either under Intermediate or Task-work as the case may be. This Form must be posted up daily and the daily totals carried into Field Accounts Form No. IV.

NAME OF WORK—METAL-BREAKING, KATOL-KALMESHWAR ROAD.

DISTRICT NAGPUR.

Charge No. 1. { 12 Gangs on Task work (b) } Grain equivalent of Wages during week 9½ seers per rupee.
46 Gangs on Intermediate (a)

Date,	Muharrir.	INTERMEDIATE (a).										TASK-WORK (b).										GRATUITOUS.				QUANTITY OF WORK DONE.												
		WORKERS.										WORKERS.																										
		Special.		Class I.		Class II.		Class III.		Proportion of work done to task set.		Amount paid.		Special.		Class I.		Class II.		Class III.		Fines.		Amount paid.		Class IV. Adults.		Class V. Children.		Total Charges.		Earth-work.		Masonry collection.		Metal-breaking.		
		Quarry men, &c.	Gang mates.	Men.	Men.	Men.	Men.	Men.	Men.	Men.	Men.	Men.	Men.	Men.	Men.	Men.	Men.	Men.	Men.	Men.	Men.	Men.	Men.	Men.	Men.	Men.	Men.	Men.	Men.	Men.	Men.	Men.	Men.	Men.	Men.	Men.		
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23														
Sun- day, 10th Decem- ber 1899.	1. Kanya Lal.	
	2. Ram Singh	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	3. Faiz Mahomed.	...	14	98	37	182	79	...	30	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	4. R. h o p Singh.	...	18	128	48	230	87	...	38	13	9	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	5. Chote Lal.	...	14	56	37	182	79	...	30	0	0	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	Totals ...	...	46	314	122	614	245	...	98	13	9	...	12	238	118	61	230	479	180	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Mon- day, 11th Decem- ber 1899.	1. Kanya Lal.	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	2. Ram Singh	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	3. Faiz Mahomed.	...	14	98	37	182	79	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	4. R. h o p Singh.	...	18	120	48	230	87	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	5. Chote Lal.	...	14	96	37	182	79	...	32	6	9	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	Totals ...	...	46	314	122	614	245	...	100	4	6	...	12	238	118	61	230	479	180	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...

APPENDIX XIV.

SAMPLE OF

OFFICER-IN-CHARGE'S CASH BOOK.

(P. W. D. Form No. 3.)

Note.—All connected with Kitchens is classed under *Gratuitous*, except the pay of monthly employés, such as the Hospital Assistant and Kitchen Muharrir; these fall under *Work Establishment*.

The Officer-in-charge will only have three kinds of vouchers to submit in support of the charges in his Cash-book, *viz.* :—

- (1) Officer-in-charge's Day-book (Field Accounts Form No. III).
- (2) Acquittance Rolls (P. W. D. Form No. 23).
- (3) Hand Receipts (P. W. D. Form No. 16).

In the example—

Vouchers Nos. 1, 8, 11, 12, 15, 16 and 20 are the Day-books of the Officer-in-charge (Field Accounts Form No. III).

Vouchers Nos. 2, 3, 4 and 10 are paid Acquittance Rolls (P. W. D. Form No. 23).

Vouchers Nos. 5, 9, 13, and 14 are Hand Receipt Forms (P. W. D. Form No. 16) with the description of supplies and amounts paid entered thereon and receipted by the Vendor. To these receipts the detailed bills of Vendors are attached.

Vouchers Nos. 6, 7, 17, 18 and 19 are Hand Receipt Forms (P. W. D. Form No. 16) without any supporting details other than those entered on the Form itself.

Imprest Cash Book of Waman Rao, Officer-in-charge, Katol-Kalmeshwar Road, Charge No. I.

Day of the month.	Voucher No.	Transactions.	Amount of each payment.	Total.	
1	2	3	4	5	6
			Rs. a. p.	Rs. a. p.	
		Balance ...	...	720 2 6	
December 10th.	1	Paid Gang Registers of 10th— Wages ...	174 3 9		Wages.
		Gratuitous ...	6 9 3		Gratuitous.
Do. do.	2, 3 & 4	Paid Work Establishment wages for November ...	324 14 3		Work Establishment.
Do. 11th.		Received cash from Treasury ...		2,000 0 0	
				2,720 2 6	
Do. do.	5	Paid Hera Mull, Bania, for stores for kitchen ...	42 0 0		Gratuitous.
Do. do.	6	Paid sweepers for burying two cholera corpses ...	1 0 0		Other items.
Do. do.	7	Paid for firewood for burning three other corpses ...	2 0 0		Do.
Do. do.	8	Paid Gang Registers of 11th— Wages ...	190 15 3		Wages.
		Gratuitous ...	6 9 3		Gratuitous.
Do. 12th.	9	Paid Laxman Patel for grass and bullies for kitchen sheds ...	14 2 6		Do.
Do. do.	10	Paid T. Narainswamy, Hospital Assistant's allowances for November ...	23 12 0		Work Establishment.
Do. do.	11	Paid Gang Registers of 12th— Wages ...	192 1 3		Wages.
		Gratuitous ...	6 9 3		Gratuitous.
		Carried over ...	984 12 9	2,720 2 6	

APPENDIX XIV.—(Contd)

Imprest Cash-book of Waman Rao, Officer-in-charge, Katol-Kalmeshwar Road, Charge No. I.—(Concid.)

Day of the month.	Voucher No.	Transactions.	Amount of each payment.	Total.	
1	2	3	4	5	6
			Rs. a. p.	Rs. a. p.	
		Brought forward ...	984 12 9	2,720 2 6	
December 13th.	12	Paid Gang Registers of 13th— Wages ...	196 14 0		Wages.
		Gratuitous ...	6 9 3		Gratuitous.
Do. 14th.	13	Paid Chabildas, Bania, for stores for kitchen ...	167 10 7		Do.
Do. do.	14	Paid for chuppers and mats for cholera sheds ...	12 0 0		Other items.
Do. do.	15	Paid Gang Registers for 14th— Wages ...	215 15 6		Wages.
		Gratuitous ...	6 9 9		Gratuitous.
Do. 15th.	16	Paid Gang Registers for 15th— Wages ...	238 5 3		Wages.
		Gratuitous ...	6 10 9		Gratuitous.
Do. 16th.	17	Paid Heera, Kitchen Warder's wages, 1st to 15th ...	2 1 9		Do.
Do. do.	18	Paid Muttroo, Assistant Warder's wages, 8th to 15th ...	0 14 3		Do.
Do. do.	19	Paid for nands for pias ...	2 1 9		Other items.
Do. do.	20	Paid Gang Registers for 16th— Wages ...	241 10 3		Wages.
		Gratuitous ...	6 10 9		Gratuitous.
				2,088 14 7	
		Balance ...	...	631 3 11	

WAMAN RAO,
Officer-in-charge.

Dated the 16th December 1899.

ABSTRACT OF CHARGES.

Names of works.	Wages.	Gratuitous.	Work Establishment.	Other items.	Total.
	Rs. a p	Rs. a. p	Rs. a. p.	Rs. a. p.	Rs. a. p.
FAMINE RELIEF—NAGPUR DISTRICT. Charge No. I.—Katol-Kalmeshwar Road. Period—10th to 16th December 1899.	174 3 9	6 9 3	324 14 3	1 0 0	
	190 15 3	42 0 0	23 12 0	2 0 0	
	192 1 3	5 9 3	...	12 0 0	
	196 14 0	14 2 6	...	2 1 9	
	215 15 6	6 9 3	..	..
	238 5 3	6 9 3	...	...
	241 10 3	167 10 7	...	...
	...	6 9 9	...	...
	...	6 10 9	...	...
	...	2 1 9	...	...
	...	0 14 3	...	...
	...	6 10 9	...	...
	Total ...	1,450 1 3	273 1 4	348 10 3	17 1 9
					2,088 14 7

The Total under *Work Establishment* and *Other items* to the nearest even rupee are carried into the Officer-in-charge's Weekly Report. See columns 37 and 38 of Field Accounts Form No. IV.

APPENDIX XIV.—(Contd.)

(49)

P. W. D. FORM No. 16.]

Block.

Payee—Tikaram.

Name of work—Famine Relief-work No. 1,
Nagpur.

Date of present payment—16th December 1899.

Voucher No. 19.

Value of work or supplies to date
of latest measurements ... Rs. _____

Payments previously made ... Rs. _____

Payment now made ... Rs. 2-1-9

Distribution of payments and quantities by sub-
heads, or other necessary particulars.

Other items.

Initials of Officer making } W. R.
the payments.Total value of work done or materials
supplied up to date of last measure-
ment or inspection.

Rs. a. p.

Previous payments
made ...

Payment now made

BALANCE ...

Vide

Signature of }
payee

NOTES.—This form should be used in the following cases:—

- For "payments on account" for work or supplies, as an alternative to Contract Certificate Form No. 14.
- When payment is made as an advance or any other miscellaneous account.
- When payment is made in this form for work, the accounts of which are kept in the Divisional Office by sub-heads, the Sub-Divisional Officer must, unless he prepares the work abstract, distribute the quantities and payments by sub-heads. In such cases it will probably be more convenient to use Form No. 14.

(49)

Cash-Book Voucher No. 19. [P. W. D. FORM No. 16.

Hand Receipt Form.

(To be used indifferently for payments for works, materials or
other services.)

NAGPUR DIVISION:

Charge No. 1, Kalmeshwar Road.

December, 16th, 1899.

Voucher No. 19.

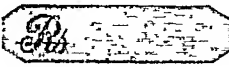
Received from the Officer-in-charge

in charge of Katol-Kalmeshwar Famine Relief-Work,
Charge No. 1,

Paid by cash.*

Paid by cheque.*

Paid by me.*

the sum of  rupees two anna one
and pies nine only. Paid in my presenceName of work or purpose for which payment is made—
Supplying six big nands and four ghurras.

Witnesses. { T. Narainswamy, Hospital Assistant.
Ram Singh, Muharrir.
X Tikaram (his mark).

The 16th December 1899.

If the person receiving money signs in the vernacular, he should also enter in the vernacular the amount received and his place of residence, his name being noted in English on the voucher. If unable to write, his mark or seal to the above entries should be attested by two competent witnesses, in whose presence the nature of the payment should be fully explained.

* The disburser will initial the remark applicable to the case.

Rs. a. p.

(To be filled in when the payment is made
for work done or supplies received.)

Acquittance Roll for the Month of December 189 .

[Cash Book Voucher No. 10.]

Name.	Class and Grade.	Amount of allowance* for November.	Amount of Income-tax imposed.	Net amount paid.	NOTE OF DEDUCTIONS OF SUBSCRIPTIONS TO SERVICE FUNDS, &c.		Signature † and Stamp for each payment exceeding Rs. 20.
					Particulars.	Amount.	
T. Narainswamy	Hospital Assistant	Rs. a. p. 23 12 0	Rs. a. p. ...	Rs. a. p. 23 12 0	.....	Rs. a. p. ...	Signature † and Stamp for each payment exceeding Rs. 20.
					Pay by cash † Rupees twenty-three and annas twelve only.		
					Paid by cheque †		
					Paid by me † VI. Rao.		
					Paid in my presence †		
	Total	23 12 0	...	23 12 0	.....	...

* Salaries and Travelling allowances should not be included

* Salaries and Travelling allowances should not be mixed up: a separate Acquittance Roll should always be prepared for each when paid separately.
† Against each signature the date of payment should be entered when the payment is made and acknowledged.
‡ The disburser will initial the remark applicable to the case.

Dated the 12th December 18

Accountant.

T. SMITH,
Sub-Engineer.

APPENDIX XV.

FIELD ACCOUNTS FORM NO. IV.

Week ending Saturday, the

District.

Division.

No. _____, dated _____ 190 .

Forwarded to the Sub-Divisional Officer.

Officer-in-charge.

No. _____, dated _____ 190 .

Forwarded to the Divisional Engineer.

Sub-Divisional Officer.

ABSTRACT.

Particulars.	WAGES PAID TO INTERMEDIATE GANGS.			Wages paid to task or weakly gangs.	WAGES PAID ON OTHER ITEMS.			Gratui-ous relief.	Work estab-lish-ment.	Other items.	Grand Total.	Remarks.
	EARTHWORK IN EMBANK-MENT (SOFT MOORUM). LEAD 500 FT.	METAL-BREAKING.	MOORUM CARRYING AND STACKING.		Hut-ting.	Conser-vancy.	Water-supply.					
	Task, Class I—100 cft.	Task, Class I—4½ cft. Class II—3 cft.	Task, Class II, Lead ½ cft. 1 mile } 2									
Total expenditure during the week	Rs. 757	529	171	76	25	11	33	46	100	36	1,784	
Week's wages to workers only (vide column 11)	Rs. 757	529	171	...	...	...	...	..	...	...	...
Quantity of work done (vide column 34)	Cft. 114,300	15,243	4,689	...	...	...	...	...	...	...	...
Famine rate per % cft.	... 0 10 7	3 7 6	3 10 4	...	...	...	...	..	...	...	...
Normal Schedule Rate	... 0 12 0	3 10 0	1 2 0	...	...	...	...	...	...	...	...
Number of units relieved (vide column 33)	...	...	...	...	...	...	...	...	..	...	19,956	No.
Wages and gratuitous relief for week (totals of columns 35 and 36 added together)	Rs. ...	...	...	...	...	...	...	...	...	...	1,648	Rs
Rate per unit	Pice. ...	...	...	...	...	...	...	...	...	...	5'28	Pice.
Quantity of work done to date	Cft. 237,800	39,746	10,780	...	...	...	...	...	...	...	...
Capacity for further employment in day-units	No. ...	...	...	...	...	...	...	...	...	...	185,762	Day-units.

Weekly Report for Deputy Commis

No. 3-CONSTRUCTION OF THE NAGPUR-BISHNOOR ROAD-CAMP No. 4, TELINKERRY.																				
Serial number and Name of work.		Date.	INTERMEDIATE (a).										TASK-WORK (b).							
			Special.		I. Males of gangs and other persons in responsible posts.	II.		III. Adult carriers (over 14 years).	Total.	Proportion of work done to task set.	Amount of wages paid.	Special.		I. Males of gangs and other persons in responsible posts.	II.		III. Adult carriers (over 14 years).	Total.	Fines.	Amount of wages paid.
			Men with special qualification such as quarrymen, &c.	Notes of gangs and other persons in responsible posts.		Men.	Women.					Men with special qualification such as quarrymen, &c.	Notes of gangs and other persons in responsible posts.		Men.	Women.				
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	
Earthwork.	Decr. 25th	1	45	174	117	811	133	1,381	Full.	Rs. 2. 6	...	...	...	...	...	...	...	...	Rs. 2. 6
	" 26th	1	45	174	117	808	132	1,377	do.	131 0 3	...	...	...	...	...	...	...	...	...
	" 27th	1	43	161	118	638	123	1,073	do.	101 11 9	...	...	...	...	...	...	...	...	...
	" 28th	1	49	159	109	713	123	1,145	do.	108 11 6	...	...	...	...	...	...	...	...	...
	" 29th	1	43	150	109	713	123	1,145	do.	108 9 0	...	...	...	...	...	...	...	...	...
	" 30th	1	43	150	109	713	123	1,146	do.	85 6 6	...	...	...	...	...	...	...	...	...
	" 31st	1	43	150	109	713	123	1,146	do.	108 11 6	...	...	...	...	...	...	...	...	...
Total		5	300	1,143	791	5,022	876	6,214	...	756 10 0	...	...	...	...	...	...	...	...	...
Metal-break- ing.	Decr. 25th	1	32	133	43	538	147	824	Full.	69 7 0	...	3	35	35	47	23	120	...	31 4 3	
	" 26th	...	32	133	43	535	146	820	do.	78 15 3	...	3	35	35	43	25	120	...	31 4 3	
	" 27th	...	33	130	43	544	143	801	1	81 10 3	...	3	35	35	43	25	120	...	31 4 3	
	" 28th	1	32	131	42	530	139	825	Full.	77 14 0	...	3	35	35	43	25	120	...	31 4 3	
	" 29th	...	32	131	42	544	140	860	do.	80 4 9	...	3	32	32	42	25	120	...	31 4 3	
	" 30th	1	32	131	42	544	140	870	do.	64 3 0	...	3	32	32	42	25	120	...	31 4 3	
	" 31st	...	32	130	39	458	138	837	do.	76 13 3	...	3	32	32	42	26	120	...	31 4 3	
Total		3	225	928	294	3,693	992	6,135	...	522 2 6	...	14	236	114	298	178	840	...	76 3 0	
Moon- carrying.	Decr. 25th	...	11	...	52	183	52	298	Full.	25 14 0	...	...	...	...	...	...	...	...	...
	" 26th	...	10	...	51	179	52	292	do.	25 6 6	...	...	...	...	...	...	...	...	...
	" 27th	...	10	...	50	178	51	289	do.	25 3 9	...	...	...	...	...	...	...	...	...
	" 28th	...	10	...	49	177	51	297	do.	24 15 9	...	...	...	...	...	...	...	...	...
	" 29th	...	11	...	50	176	50	287	do.	24 11 0	...	...	...	...	...	...	...	...	...
	" 30th	...	11	...	49	174	48	282	1	20 11 0	...	...	...	...	...	...	...	...	...
	" 31st	...	11	...	49	174	47	283	Full.	23 11 3	...	...	...	...	...	...	...	...	...
Total		...	74	...	350	1,241	353	2,018	...	170 8 6	...	...	...	...	...	...	...	...	...
Hutting.	Decr. 25th	...	5	14	1	11	1	32	...	3 10 0	...	...	...	...	...	...	...	...	...
	" 26th	...	5	14	1	11	1	32	...	3 10 0	...	...	...	...	...	...	...	...	...
	" 27th	...	5	14	1	11	1	32	...	3 10 0	...	...	...	...	...	...	...	...	...
	" 28th	...	5	14	1	11	1	32	...	3 10 0	...	...	...	...	...	...	...	...	...
	" 29th	...	4	15	1	11	1	32	...	3 9 9	...	...	...	...	...	...	...	...	...
	" 30th	...	5	14	1	11	1	32	...	3 10 0	...	...	...	...	...	...	...	...	...
	" 31st	...	4	15	1	11	1	32	...	3 9 9	...	...	...	...	...	...	...	...	...
Total		...	33	100	7	77	7	224	...	25 5 6	...	...	...	...	...	...	...	...	...
Conservancy.	Decr. 25th	...	1	8	4	...	...	13	...	1 8 3	...	...	...	...	...	...	...	...	...
	" 26th	...	1	8	4	...	...	13	...	1 8 3	...	...	...	...	...	...	...	...	...
	" 27th	...	1	8	4	...	...	13	...	1 8 3	...	...	...	...	...	...	...	...	...
	" 28th	...	1	8	4	...	...	13	...	1 8 3	...	...	...	...	...	...	...	...	...
	" 29th	...	1	8	4	...	...	14	...	1 9 9	...	...	...	...	...	...	...	...	...
	" 30th	...	1	8	5	...	...	14	...	1 9 9	...	...	...	...	...	...	...	...	...
	" 31st	...	1	8	5	...	...	14	...	1 9 9	...	...	...	...	...	...	...	...	...
Total		...	7	56	31	...	...	94	...	10 14 3	...	...	...	...	...	...	...	...	...
Water-supply.	Decr. 25th	...	15	4	10	11	...	40	...	4 9 3	...	...	...	...	...	...	...	...	...
	" 26th	...	15	4	13	13	...	45	...	5 0 9	...	...	...	...	...	...	...	...	...
	" 27th	...	15	4	13	13	...	45	...	5 0 9	...	...	...	...	...	...	...	...	...
	" 28th	...	15	4	13	13	...	45	...	5 0 9	...	...	...	...	...	...	...	...	...
	" 29th	...	15	4	10	11	...	40	...	4 9 3	...	...	...	...	...	...	...	...	...
	" 30th	...	15	4	10	11	...	40	...	4 9 3	...	...	...	...	...	...	...	...	...
	" 31st	...	15	4	10	11	...	40	...	4 9 3	...	...	...	...	...	...	...	...	...
Total		...	105	28	79	83	...	295	...	33 7 3	...	...	...	...	...	...	...	...	...
GRAND TOTAL.		8	744	2,255	1,552	10,193	2,228	16,080	...	1,520 0 0	...	14	236	114	298	178	840	...	76 3 0	
Average daily.		...	...	...	...	...	...	2,426	...	...	...	...	...	...	...	...	120	...	...

[illegible]

Weekly Report for period ending Saturday, the 31st December 1899.

1. Physical condition of (A) those applying for admission $\left\{ \begin{array}{l} (a) \text{ Fairly healthy.} \\ (b) \text{ Weakly.} \\ (c) \text{ Emaciated.} \end{array} \right.$

Do. of (B) Relief-workers generally $\frac{\text{Good}}{\text{Not good}}$.

2. Applicants for relief are $\frac{\text{still coming in}}{\text{not coming in}}$.

3. The number of deaths occurring on the work during the week and the prevalence of any epidemic or abnormal sickness.

4. Efficiency of food and water-supply arrangements. Grain used as basis of wages and its price in seers per rupee.

5. Sufficiency of staff and organization of gangs.

6. $\frac{\text{Difficulty}}{\text{No difficulty}}$ is found in providing work for all applicants. At the present rate of progress work remains for _____ weeks.

7. Succinct notes on work and anything that should be brought to notice on the relief-works.

DATED AT

The

1900. }

Officer-in-charge.

NOTES FOR PREPARATION OF THE FORM.

1. The Officer-in-charge will fill up the Form on reverse daily and forward it weekly to the District Sub-Divisional Officer.

2. The serial number of column 1 should be kept the same, each new work starting with a new serial number and keeping it till closed.

3. If wages are given for Sunday, the attendance for Sunday must be counted in as well, and the daily average obtained by dividing totals by 7.

4. The expenditure on wages should be shown separately for the various items of work, e. g., Earthwork, Metal-breaking, Moorum-carrying. The wages paid in connection with "Other items" should also be separately shown; viz., for Hutting, Conservancy and Water-supply.

5. All entries in columns 35 to 39 must be to the nearest rupee, omitting fractions of a rupee.

Column 35 should include all wages whether paid on works or in connection with "Other items."

Column 38 should exclude all wages paid on gang registers in connection with "Other items."

6. The abstract of front page will be filled in by the District Sub-Divisional Officer.

7. *Capacity for further employment.*—A new approximation, when work of one sort, e. g., metal collection only is being done, can be got by taking the same proportion of day-units to the work that remains to be done, that the number of day-units employed during the week bears to the work done during the week.

When the work is mixed, take the number of day-units that the work is calculated to employ as given in the latest Revised Famine Programmes, and deduct the number of day-units employed up to date.

8. This form is posted from Officer-in-charge's Day-book (Form No. III) and Kitchen Accounts Form No. III, and the figures for *Works Establishment* and *Other Items* taken from the Cash-book.

APPENDIX XVI.

FIELD ACCOUNTS FORM No. V.

*Harsud Sub-Division, Harsud. Head-quarters, Nimar District.**Corporal W. Brown, Sub-Divisional Officer. Captain H. Ainslie, Famine Works Superintendent.*

NOTE FOR THE INFORMATION OF THE SECRETARY TO THE CHIEF COMMISSIONER, CENTRAL PROVINCES, PUBLIC WORKS DEPARTMENT.

(To be posted weekly direct to the Secretary to the Chief Commissioner, Central Provinces, Public Works Department, commencing with the week ending Saturday, 190 .)

Despatched on Monday or Tuesday the

of

Number.

The number of persons employed on Famine Relief Works for the week ending Saturday the of has an average of (approximate) daily.

The numbers on Saturday were.

Approximate Expenditure.

The approximate expenditure on Famine Relief Works for the week has been Rs.

Increase or Decrease.

Persons are $\frac{\text{still coming in}}{\text{not coming in}}$

Condition.

Physical condition of— (a) Fairly healthy.
(a) those applying (b) Weekly.
for admission. (c) Emaciated.
(b) Relief-workers generally $\frac{\text{good}}{\text{not good}}$.

Ordinary Works.

The approximate number of persons on ordinary works (give name) and the payments made by me (or bills issued) amount to Rs.

Prices of food.

The price of common grain (*viz.*, _____)

_____ is _____ seers per rupee.

Supplies are $\frac{\text{sufficient}}{\text{insufficient}}$.

AVERAGE DAILY NUMBER DURING WEEK.				Total all classes on Saturday.	Expenditure during week.
Intermediate.	Task work.	Gratuitous.	Total.		
1,365	3,598	1,516	6,479	6,372	Rs. 2,950
2,569	766	1,092	4,427	4,258	1,822
2,682	1,979	967	5,628	5,330	3,150
6,616	6,343	3,575	16,534	15,960	7,922
* Totals for the week.					
46,312	44,401	25,025	115,738		

* To be shown in red ink.

The following works have been started :—

1. Asapur :—H a r s u d-Saria-pani Road construction. Earthwork and metal collection.
2. Kalumachak :—Wide n i n g line and breaking ballast for G. I. P. Railway.
3. Tawa. Do.

4.

5.

6.

1. The following works have been visited by me :—

2.

3.

4.

5.

6.

Difficulty is found in providing work for all applicants. At the present rate of progress, work remains for _____ weeks.

Sub-Divisional Officer.

GENERAL REMARKS.

Sub-Divisional Office.

No _____.

Dated _____ 1900.

Submitted to the Secretary to the Chief Commissioner, Central Provinces, Public Works Department, in accordance with paragraph 81 of G. O. No. 287-7630, dated 20th September 1899.

Sub-Divisional Officer,

Sub-Division,

District.

APPENDIX XVII.

FIELD ACCOUNTS FORM No. VI.

For four weeks ending Saturday,
Charge No.

the

District.

Division.

No. , dated the

190 .

Forwarded to the Sub-Divisional Officer,

Sub-Division.

Officer-in-charge.

No. , dated the

190 .

Forwarded to the Executive Engineer,

Division.

Sub-Divisional Officer,

Sub-Division.

Statement of Work done during the 4 weeks ending
rates compared with expenditure.

and up to date at normal

Description of work.										Remarks.
1. Work done during week ending	...									
2. " " " "	...									
3. " " " "	...									
4. " " " "	...									
5. Total for 4 weeks ending	Cft.									
5-a. Task set	Class I.									
6. Normal rate per % cft.	Rs.									
7. Value at normal schedule rate	Rs.									
8. Expenditure 4 weeks	Rs.									
9. Famine rate per % cft.	Rs.									
10. Quantity of work done up to week ending.	Cft.									
11. Total quantity to date	Cft.									
12. Normal rate per % cft.	Rs.									
13. Value of work done to date at normal rate.	Rs.									
14. Total expenditure to date	Rs.									
15. Famine rate	Rs.									

Work Agent.

Officer-in-charge.

KITCHEN ATTENDANCE REGISTER.

For the week ending Saturday, the 16th December 1899.

Date.		NUMBER OF DEPENDANTS FED. WHO WERE NOT GIVEN MONEY DOLE—CLASS (a).				NUMBER OF NEW ARRIVALS FED. AND OTHER SPECIAL CASES—CLASS (b).				Total (a) & (b).
		Adults over 14 years.	CHILDREN		Total.	Adults over 14 years.	CHILDREN		Total.	
			8 to 14 years.	Under 8 years.			8 to 14 years.	Under 8 years.		
		No.	No.	No.	No.	No.	No.	No.	No.	No.
December 10th.	Non-workers.	44	34	288	366	27	2	9	38	404
	Workers ...	...	...	...	...	20	1	...	21	21
	Total ...	44	34	288	366	47	3	9	59	425
Do. 11th	Non-workers.	47	34	268	349	24	2	17	43	392
	Workers ...	...	...	...	...	10	1	...	11	11
	Total ...	47	34	268	349	34	3	17	54	403
Do. 12th	Non-workers.	47	34	270	351	24	3	37	64	415
	Workers' ...	...	...	...	...	8	2	...	10	10
	Total ...	47	34	270	351	32	5	37	74	425
Do. 13th	Non-workers.	47	35	270	352	4	3	42	49	401
	Workers ...	...	...	...	...	2	1	...	3	3
	Total ...	47	35	270	352	6	4	42	52	404
Do. 14th	Non-workers.	46	35	271	352	...	...	51	51	403
	Workers ...	...	...	...	...	...	...	...	...	...
	Total ...	46	35	271	352	...	...	51	51	403
Do. 15th	Non-workers.	46	33	271	350	...	...	51	51	401
	Workers ...	...	...	...	...	...	...	...	...	...
	Total ...	46	33	271	350	...	...	51	51	401
Do. 16th	Non-workers	46	33	271	350	3	...	51	54	404
	Workers ...	...	...	...	...	1	...	...	1	1
	Total ...	46	33	271	350	4	...	51	55	405
Total	Non-workers.	323	238	1,889	2,470	82	10	258	350	2,820
	Workers ...	...	...	...	...	41	5	...	46	46
GRAND TOTAL		323	238	1,889	2,470	123	15	258	396	2,866

N. B.—(1) Non-workers figures are carried forward to Field Accounts Form No. IV.

(2) Worker figures are carried forward to Kitchen Accounts Form No. III.

Hospital Assistant.

APPENDIX XIX.

KITCHEN ACCOUNTS FORM NO. II.]

DAILY REGISTER OF RECEIPTS AND ISSUES OF STORES.

Kitchen No. 2 at Relief Work at Katol-Kalmeshwar Road, District—Nagpur.

	Date.	Rice,		Flour,		Dhal.		Salt.		Tamarind,		Oil,		Ghec.		Chillies,		Onions,		Vegetables,		Firewood,		
		S.	Ch.	S.	Ch.	S.	Ch.	S.	Ch.	S.	Ch.	S.	Ch.	S.	Ch.	S.	Ch.	S.	Ch.	S.	Ch.	Mds.	S.	
Balance from last week.		701	8	...	...	20	2	2	...	1	...	2	4	2	8	1	2	...	...	5	...	...	56	...
Receipts during the week.	December 10th	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	" 11th	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	" 12th	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	" 13th	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	" 14th	800	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	" 15th	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	" 16th	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Total Receipts	.....	800	...	...	...	120	...	50	...	...	...	...	...	40	...	4	...	...	...	12	...	...	...	...
Total	.....	1,501	8	...	...	140	2	32	...	1	...	2	4	42	8	5	3	...	...	17	...	...	56	...

Issues during the week.	December 10th	100	4	...	...	10	2	2	12	...	...	...	...	2	12	...	7	...	...	2	...	...	2
	" 11th	106	...	...	...	12	...	2	14	...	...	...	...	2	14	...	7	...	...	2	...	...	2
	" 12th	109	...	...	...	16	...	3	8	...	...	...	...	3	18	...	8	...	...	2	...	...	2
	" 13th	103	...	...	...	12	...	2	14	...	...	...	...	2	14	...	7	...	...	2	...	...	2
	" 14th	104	...	...	...	12	...	2	8	...	...	...	...	2	14	...	7	...	...	2	...	...	2
	" 15th	103	...	...	...	13	...	2	8	...	...	...	...	2	14	...	7	...	...	2	...	...	2
	" 16th	105	...	...	...	13	...	2	8	...	...	...	...	2	14	...	7	...	...	2	...	...	2
Total Issues	.....	742	4	...	...	90	...	23	5	...	...	...	...	22	5	3	3	...	...	16	...	...	15
Balance on hand	.....	759	4	...	...	50	2	19	21	1	...	2	4	20	3	2	...	...	...	...	...	...	40

T. NARAINSWAMY,

Dated 16th December 1899.

Hospital Assistant.

STATEMENT OF RELIEF GIVEN IN KITCHENS IN FAMINE RELIEF CAMPS DURING THE WEEK ENDING 16TH DECEMBER 1899.

Name of Camp—Charge No. 1. Hospital Assistant in charge—T. Narainswamy. Officer-in-charge—Waman Rao.

Date.	2			3			4	5				6
	NUMBER OF DEPENDANTS FED, WHO WERE NOT GIVEN A MONEY DOLE.—CLASS (a).			NUMBER OF NEW ARRIVALS FED, AND OTHER SPECIAL CASES.—CLASS (b).			Grand total of number fed.	DETAIL OF EXPENDITURE INCURRED IN THE KITCHEN.				REMARKS.
	Adults over 14.	Children over 8.	Children under 8.	Adults over 14.	Children over 8.	Children under 8.		Quantity.	Description.	Rate.	Amount.	
Sunday, December 10th	44	34	263	27	2	9	384	Srs. Ch.	Rice	Secrs.	Rs. a. p.	The kitchen was opened on the 15th October, and the total expenditure to end of this week is Rs. 1,554-
Monday, do.	47	31	268	24	2	17	392	742 4	Dhal	At 5½ per rupee	135 0 0	
Tuesday, do.	47	34	270	24	3	37	415	93 0	Salt	" 6½	13 13 6	
Wednesday, do.	47	35	270	4	3	42	401	22 5	Ghee	" 8	2 12 8	
Thursday, do.	46	35	271	...	...	51	403	22 5	Vegetables	" 1	22 5 0	
Friday, do.	46	33	271	...	...	51	401	16 4	Chillies	" 8	2 0 6	
Saturday, do.	46	33	271	3	...	51	404	3 4		" 2	1 9 0	
Total	323	238	1,889	82	10	238	2,800	Total food				177 8 8
								Establishment				3 0 0
								Miscellaneous: fuel, tin-pots, &c.				11 2 6
								GRAND TOTAL				194 11 2
												Cost per unit fed 4½ pice.

KAROL :
The 16th December 1899.T. NARAINSWAMY,
Hospital Assistant.WAMAN RAO,
Officer-in-charge.

KITCHEN ACCOUNTS FORM No. IV.]

APPENDIX XXI.

Stock Book of Utensils of Kitchen No. 2 on the Relief Work at Katol-Kalmeshwar Road.

No. of articles.	Description of utensils.	Date of receipt in store.	Deduct losses with date of report of loss.	Balance in stores.	Date of verification, with signature. *
	<i>Cooking utensils—</i>				
3	Large copper dachies	...	...	3	Verified 15-12-99. T. NARAINSWAMY, Hospital Assistant.
4	Small "	...	...	4	
8	Iron ladles "	...	...	8	
	<i>Utensils for eating and drinking—</i>				
300	Tin plates (Sunkis)	...	20	280	
300	Tin mugs ...	...	15	285	

* The balance in store should be verified weekly by the Hospital Assistant.

KITCHEN ACCOUNTS FORM No. IV.]

APPENDIX XXII.

Indent No. for supplies required for Kitchen No. 4 at Relief Work at

Date

6																	7	8
		DESCRIPTION AND QUANTITY OF SUPPLIES REQUIRED.															Remarks.	
1	2	3	4	5														
					Rice.		Dhal.		Salt.		Tamarind.		Chillies.		Ghee.			Onions.
Rations required on minimum scale.	Number.	Equivalent number of adults rations.	Number of day's supply.	Total (column 2 multiplied by column 3).	Seers.	Ch.	Seers.	Ch.	Seers.	Ch.	Seers.	Ch.	Seers.	Ch.	Seers.	Ch.		
Adults over 14	...																I certify that I have received the supplies specified in this indent.	
Children 10 to 14	...																	
" 8 to 10	...																	
" under 8	...																	

* Note.—Other columns to be included if other things are required. In calculating the equivalent number of adult rations take children 10 to 14 years at $\frac{1}{4}$ rds children 8 to 10 years at $\frac{1}{2}$ and children under 8 years at $\frac{1}{4}$ rd.

Hospital Assistant.

Dated

APPENDIX XXIII.

MEDICINES, SURGICAL INSTRUMENTS, MEDICAL AND SURGICAL APPLIANCES AND Sundries REQUIRED FOR A FIELD HOSPITAL ON RELIEF-WORKS. STRENGTH OF CAMP 3,000.

Medicines,	A six months' supply.		
	Lbs.	Oz.	Drs.
Acacia Gummi Pulvis
Acid Boricum
" Carbolicum
" Nitricum
" Nitro-Hydrochloricum Dil
" Gallicum
" Tartaricum
" Sulphuricum pur
Antifebrin
Ammonia Carbonas
Argenti Nitras (stick)
Atropinæ Sulphas
Bismuth Subnitras...
Chlorodyne
Cinchonidine Sulphas
Creta Preparatu
Emplastrum Resina (spread)
Extractum Ergotai Liquidum
Glycerinum
Hydrargyrum Perchloridum
" Subchloridum
" Iodidum Rubrum
Iodoformum
Ipecacuanhæ Pulvis
Linimentum Camphoræ Co.
" Saponis
Liquor Ammonia Acetatis Fort
Liquor Morphinæ Hydrochloratis
Magnesia Carbonas
" Sulphas
Oleum Ricini
" Mentha Piperetæ
Opium
Paraffin Molle (Vaseline)
Pilula Hydrargyri
" Rhei Co
" Scillac Co.
Plumbi Acetas
Potassii Bicarbonas
" Bromidum
" Chloras
" Iodidum
" Nitras
Potassii Permanganas
Pulvis Cretæ Aromaticus
" Jalapæ Co.
" Ipecacuanhæ Co.
" Rhei Co.
Quinæ Sulphas
Soda Tartarata
Sodii Bicarbonas
Spiritus Etheris
" Nitrosi
" Ammonia Aromaticus
" Camphoræ
" Jumperi
" Rectificatus
Sulphur Sublimatum
Tinctura Camphoræ Co.
" Capsici
" Catechu
" Digitalis
" Opii
" Scillæ
" Ferri Perchloridi
" Iodi
Vinum Ipecacuanhæ
Zinci Oxidum
" Sulphas
Phenyle—Little's Soluble
Disinfecting Powder, MacDougall's, in Casks of 112 lbs.
	1 Gallon.		
	1 Cask.		

Surgical Instruments, Medical and Surgical Appliances and Sundries.					Quantity.
Catheters, Elastic Gum	...	...	...	...	1 set.
Lancet, vaccinating	...	...	...	...	No. 1.
Pocket dressing case, Kemp's No. 2 at Rs. 44	...	...	...	...	" 1.
Ligature, silk	...	...	...	...	Drs. 2.
" silver wire	...	...	...	...	" 2.
Stethoscope, cedarwood	...	...	...	...	No. 1.
Splints, arm, hollowed wood, Potts	...	...	...	...	1 set of eight.
Syringe, Enema, Higginson's with Vaginal tubes	...	...	...	...	No. 1.
" Ear, brass, 4 oz. size	...	...	...	...	" 1.
" Glass, 2 oz. size	...	...	...	...	" 6.
Thermometer, clinical self-registering	...	...	...	...	" 1.
Basin for washing hands, enamelled iron, medium size	...	...	...	...	" 1.
" dressing, enamelled iron, kidney shape	...	...	...	...	" 1.
Bottle N. M., stoppered, 50 oz. size	...	...	...	...	" 6.
Bandages, calico, roller, each 2½" x 36"	...	...	...	...	" 12.
Corks, quart	...	...	...	...	" 24.
Corkscrew	...	...	...	...	" 1.
Cup, Feeding, China	...	...	...	...	" 1.
Funnel, enamelled iron, 8 oz. size	...	...	...	...	" 1.
Gallipots of sizes	...	...	...	...	" 24.
Lint	...	...	...	...	1 lb.
Measure glass 4 oz.	...	...	...	...	No. 2.
" " 2 oz.	...	...	...	...	" 2.
" " minim	...	...	...	...	" 2.
" pewter double ½ oz. and 1 oz.	...	...	...	...	No. 1 each.
Paper, Filtering	...	...	...	...	4 sheets.
Pestle and mortar, wedgewood, medium size	...	...	...	...	No. 1.
Phials, common, English, 8 oz. size	...	...	...	...	" 12.
" stoppered N. M., 4 oz. size	...	...	...	...	" 6.
Pot, decoction, tin...	...	...	...	...	" 1.
" infusion, tin	...	...	...	...	" 1.
Scales and weights, grains and drachms	...	...	...	...	1 set.
Scissors, shop	...	...	...	...	No. 1.
Slab, wedgewood, 12" x 12"	...	...	...	...	" 1.
Spatula bolas	...	...	...	...	" 2.
Sponges	...	...	...	...	1 oz.
Tow, carbolic	...	...	...	...	2 lbs.
Condensed milk, Anglo-Swiss, Milkmaid Brand	...	...	...	...	12 tin.
Rum	...	...	...	...	3 bottles.

All the above can be procured from Kemp & Co., Bombay, ready packed for about Rs. 312.

Hospital Extras and Accessories permissible under Articles 109 and 110 of the General Order above quoted.

Names of Articles.					Quantity.
*Milk, fresh	As required
Sago	...	...	...	...
Arrowroot	...	...	...	...
Suji	...	...	...	...
Sugar	...	...	...	...
Salt	...	...	...	...
Ghi, or tilli-oil	...	...	...	...
Vegetables	...	...	...	...
Condiments, consisting of chillies, turmeric, garlic and coriander	...	...	...	...
Amchur, or tamarind	...	...	...	...
Lime-juice	No. 4. No. 6.
Meat (when available)	...	...	...	...
Feeding bottles for infants	...	...	...	...
Spoons for feeding those who are unable to feed themselves	

* Condensed milk to be used when fresh milk is not procurable.

APPENDIX XXIII-A.

MEDICAL INSTRUCTIONS.

P. W. D. Famine Works, Central Provinces.

The following orders are issued by authority for the guidance of all Hospital Assistants. A copy is to be hung up in every Relief Camp Hospital.

DUTIES OF MEDICAL SUBORDINATES IN CHARGE OF FIELD HOSPITALS UNDER THE P. W. D.

1. The Hospital Assistant shall daily attend with the Officer-in-charge when the gangs are being formed, or when any new-comers arrive at the camp, and inspect their physical condition.
2. Any applicants in such a condition of weakness or emaciation as to render them unfit for work are to be fed either in the Kitchen or the Hospital, according to their condition.
3. No applicant for work or food in an emaciated condition should under any circumstances be refused relief and allowed to wander about until his condition becomes dangerous. A few good meals to a hungry man will enable him to recover his strength quickly and support himself, whereas if the people are allowed to become emaciated they are unable to digest ordinary food and it takes much time and considerable expense to get them into working condition again.
4. The Hospital diet for an emaciated patient should ordinarily consist of—

Sago	...	...	...	... 2 Chhittaks.
Sugar	...	...	...	... 2 Chhittaks.
Milk	...	...	...	... 1 Seer.

If considered necessary this may be supplemented by giving an extra quantity of milk, and a small quantity of *Tili* oil ($\frac{1}{2}$ chhittak) may be given to the patient for rubbing into his skin.
5. When the patient is able to digest more food, the rice and dhal ration may be issued to him cautiously. Some onions should be mixed with the dhal and oil added to it while it is cooking. Mung dhal should be used and very carefully cooked.
6. In some cases of extreme weakness strong mutton or chicken broth should be issued very carefully cooked or raw meat juice may be given in suitable cases.
7. On no account are patients in a state of emaciation or who have been unable to obtain food for some time to be given an ordinary ration: it cannot be digested and will very probably produce diarrhoea and dysentery.
8. Country spirit should be given in small quantities where there is extreme exhaustion.
9. Food to starving patients should always be given comfortably hot and in small quantities very frequently, about every $\frac{1}{4}$ of an hour at first, and the intervals should be gradually increased as the patient revives. The amount must be regulated by the condition of the patient.
10. For this purpose a considerable number of attendants must be allotted to the Hospital, and the Hospital Assistant should carefully select from amongst the people on the works attendants of various castes to attend to the sick: one relative may be allowed to attend a sick person.
11. These attendants should be paid something additional, either in food or wages over and above the maximum wage, so as to ensure their taking an interest in the work and prevent them from taking the patient's food when they are not relatives.
12. A fire should always be kept going night and day, so that hot food may be made up and given at all hours comfortably warm.
13. A supply of the following extras should be kept in the Hospital for the immediate preparation of easily digested nourishing food (in case other supplies are not ready) as they can be used immediately:—

Horlick's malted milk	...	...	... 3 large bottles.
Condensed milk (Milkmaid brand)	...	...	... 6 tins.
Country spirit	...	...	... 1 bottle.
14. Either of these foods mixed with some hot water will provide nourishing food and a few drops of country spirit may be added if required.
15. The Hospital Assistant should always attend the Kitchen when the food is being given out to see that it is properly cooked, of good quality, and the grain properly cleaned and issued according to scale.
16. If the dhal and rice husk is not properly cleaned away it is very irritating to the intestines.
17. The Hospital Assistant should submit his indent to the Officer-in-charge for articles of diet required in the Hospital, and for this purpose a counterfoil book will be convenient; but failing this he should keep a copy of his indents.
18. Every patient's name and disease must be entered on his bed-head ticket, together with the medicine given and the diet ordered.
19. This must be copied into a book so that the issue of extra diet can be carefully checked.
20. The Officer-in-charge should be directed by frequent inspections to see that the patients are actually getting the diets indented for.
21. The Officer-in-charge must comply with the Hospital Assistant's indents; but if he considers they are not being used legitimately, he should make an immediate urgent report to the Executive Engineer for orders.

INSTRUCTIONS TO HOSPITAL ASSISTANTS.

22. The Hospital Assistant should frequently walk round the camp in the morning and evening, and see that the people do not ease themselves inside the boundary flags; and if any are caught doing so, they should at once be brought before the Officer-in-charge for some punishment. The Hospital Assistant should also see that the guards are alert and attending to their duties regarding sanitation.

23. He should also frequently visit the camp water-supply, and see that it is protected from contamination, and that only the appointed Raots draw water from the wells.

24. On the outbreak of any epidemic, he should at once make a special report to the Civil Surgeon through the Officer-in-charge.

25. If cholera breaks out, the well should be purified with permanganate of potash in the manner laid down, and the camp moved if the outbreak is severe.

26. He should frequently inspect the food-grains being sold to see that they are of fair quality.

27. He must see to the careful cooking of the food issued in Kitchens, and that it is issued in proper quantity at the feeding time.

28. All Hospital Assistants should understand distinctly that they are the responsible advisers of the Officer-in-charge regarding sanitary matters; and the health of the camps will depend very largely on the ability and energy they display in looking after the sanitary matters generally.

29. The Officer-in-charge should give every assistance to the Hospital Assistant and at once carry out any reasonable suggestions for the improvement of sanitation. It is no use Hospital Assistants bringing sanitary defects to notice if steps are not taken at once to improve matters.

30. Until proper forms are sent round, the Hospital Assistants should keep a careful list of all patients treated either as out-patients or in-patients.

31. The following procedure will be adopted as regards supplies of medical stores, drugs and hospital comforts:—

i. Original sets of medicines with instruments, &c., will be supplied on opening a charge.

ii. These sets will be replenished as necessary by indent on the Civil Surgeon, who will transfer it, amended, if necessary, to the Executive Engineer for supply to be made.

iii. When a drug or medical store is expended to the extent of one-half the authorized scale, a quantity equal to that authorized in a new set of medicines will be indented for. It should not be forgotten that quite a fortnight to three weeks will be occupied in obtaining the new supply, except in regard to permanganate of potash and a few other items which will be held in bulk at district head quarters.

iv. The Officers-in-charge should arrange for supplies of milk, sago and sugar for the diet of emaciated persons also for keeping in hand some country spirit, obtaining the latter through one of the licensed vendors or the Sub-Divisional Officer.

v. The Executive Engineer will hold a stock of Horlick's malted milk and issue the same to Hospitals as required on indent.

vi. *Tili* oil will be supplied from the local jails as required, on fortnightly indents, for use in cooking in the Kitchens and Hospitals. The local bazar-purchased *Tili* oil is not to be used unless unavoidable.

vii. The extra foods required in dieting patients should be kept in store in such quantities as may be deemed advisable, and be issued on the daily indent of the Hospital Assistant or medical subordinate in charge.

32. The authorized forms for use in each Hospital are—

Statement No. I.—Showing the number of patients received in special Famine Hospitals attached to Relief Work camps, and the number of deaths which occurred in camp.

Statement No. I-A.—Showing diseases of in-door and out-door patients treated in hospitals attached to Famine Relief camps.

Statement I-B.—Showing the diseases from which deaths occurred in Famine Relief camps.

Out-door Tickets, Bed-head Tickets, Daily Register of out-patients, Daily Register of dieting out-patients, Diary of out-patients, Abstract of Daily Register of out and house patients in the Dispensary during the month.

33. The following matters should receive the special attention of Officers-in-charge and medical subordinates at every charge.

34. *Water-Supply*.—In every camp the distributing arrangements for water-supply should be carefully seen to. Some of the lower castes, such as Chamars, will only drink from men of their own caste, and where this is the case another water-bearer of this caste should be appointed in addition to the usual Raot.

35. No hard-and-fast rule can be made as regards the numbers of pias; they must be provided as required, and sufficient ghurras should be provided at each piao to enable enough water to be stored when the water-supply is far distant. At each camp 2 or 3 large pias should be established.

36. The number of water-carts required at each camp should be carefully settled by the Famine Works Superintendent and Sub-Divisional Officer.

37. *Latrines*.—The dry earth for latrines requires to be collected and stored in large quantities and finely powdered under cover. Latrine trenches and graves may be dug by the workers so as to be ready for emergencies.

38. All cases of cholera are to be reported daily by the Officer-in-charge direct to the Civil Surgeon of the District, copies being posted to Executive Engineer and Sub-Divisional Officer at the same time. All deaths should be reported at once to the nearest police post.

39. All cases of a serious and chronic nature or of severe injury must be removed to the nearest dispensary if such removal is not considered dangerous to the patient, and cases which can be better treated at a permanent dispensary are not to be kept in the field hospital.

40. The lesser qualified members of the medical staff are to be put in charge of hospitals in camps which are not far from (a) permanent dispensaries, (b) field hospitals in charge of a duly-qualified Hospital Assistant. Cases requiring treatment by a duly-qualified Medical Officer can then be easily removed to the permanent dispensary or to the field hospital with a Hospital Assistant in charge, as the case may be. The lesser qualified man in charge of the lesser important field hospital need not have more medicines or appliances than are necessary for the simple classes of cases.

41. It must be understood that in all matters connected with their professional work, Hospital Assistants shall correspond direct with the Civil Surgeon, taking their orders from him. As regards Hospital extras and necessities, which can be supplied on the spot, they are to be issued freely as required by indent on the Officer-in-charge.

42. The Hospital Assistant is wholly responsible for the management of the hospital. His responsibilities as regards the water-supply, conservancy, the hospital and kitchen, are set forth in para. 108 of G. O. No. 287-7630, dated the 9th September 1899.

43. Hospital Assistants are held responsible for the punctual submission on the 3rd of each month to the Civil Surgeons concerned of the monthly statement showing the diseases of the in-door and out-door patients who were admitted into Famine Relief Hospitals or treated in camp during the month.

It is not considered necessary to destroy tents or furniture which have been used by small-pox patients, and the following procedure will be sufficient :—

(a) *Tents*.—To be thoroughly sprayed with 1 in 1,000 solution of corrosive sublimate, and left standing (the kanats having been taken down) for 10 days.

(b) *Furniture*.—To be sprayed with the same solution, and afterwards washed with country soap and water, and then left exposed to light and air for 3 days.

The following mixture gives the required solution :—

Corrosive sublimate	...	...	½ ounce.
Hydrochloric acid	...	...	1 "
Water	...	...	3 gallons.

MEASURES TO BE ADOPTED ON THE OCCURRENCE OF CHOLERA IN FAMINE RELIEF CAMPS.

1. The sick to be sent at once to hospital.
2. The infected gang to be assembled on their original site, and all the water in their possession to be so thrown away that it may not interfere subsequently with the disinfection of the ground. All gurras to be broken, and old baskets and dirty useless rags burnt. Cooked food and gur should also be burnt.
3. The gang is then to be marched to the disinfecting station, where their persons and clothes will be disinfected with potash permanganate. The metal cooking vessels will there be disinfected by heating over a large fire. "Kansa" vessels can be disinfected with hot ashes. A bamboo screen, commonly called a "tapa," should be placed around the fire, upon which some of the clothes can be dried.
4. After being vacated, those parts of the original site that may have been polluted with excreta or where the patient has been lying, should be disinfected with a solution of copper sulphate, 1—500, poured from a watering can by a sweeper. The sweeper will then cover over the disinfected ground with two inches of fresh earth, well rammed down. He need not touch with his hands or remove the excreta. The site should then be pegged out and should not be used again for a month.
5. After disinfection, the gang will be marched to the new site selected for them, where they will work apart for 10 days.
6. All gangs of an infected camp will be inspected daily by the Hospital Assistant or Compounder, if they have time, otherwise by an official appointed for the purpose, to ascertain if there are any sick among them, as the segregation of these will probably do much to lessen the prevalence of the disease. Should the disease spread beyond the gang originally infected, the whole camp should move to another section of the work to a distance, if practicable, of at least five miles.
7. *Water-supply*.—The water in the wells and pias will be disinfected with potash permanganate every other day, for one week.
8. The corpses will be disposed of in accordance with paragraphs 113 and 114, Chapter XVIII, Famine Relief Work Rules. It is not necessary to put lime or other antiseptics in the graves with the corpse.
9. The hands and feet of those who have touched the sick or the corpse, should be disinfected with potash permanganate.
10. In the hospitals, carbolic powder and fresh quick-lime should be used for the floors and the surroundings of the patients. In the vessels for the reception of excreta, sulphate of copper solution should be used.

APPENDIX XXIV.

CARRIAGE OF METAL AND MOORUM FROM QUARRIES TO ROADSIDE BY RELIEF-WORKERS.

Suppose moorum or metal collected in large quantities at a quarry a quarter of a mile from the roadside, and that it is desired to carry this to the roadside by the agency of relief-workers.

	2. Taking a full strength gang consisting of—
Gangs at quarry.	20 Class I, or diggers.
	52 " II, carriers.
	16 " III, working children or ½ carrier units.
Total	... 88

The gang might be employed as follows:—The 20 diggers in filling the metal or moorum into baskets with phowras, and as this is comparatively much easier work than digging earthwork with picks, the task should be fixed at 100 cubic feet per digger or 2,000 cubic feet in all for the gang. Ten of the Class II or adult carriers should be employed behind the diggers in lifting the baskets from the ground to the carriers' heads; leaving 42 Class II and 16 Class III (equivalent to 50 carrier units) to carry the material away. There is no question of lift in their case, and the distance they should travel is found from the table of standard task (Appendix IV), viz. :—

$$\begin{aligned} \text{Lead} &= \frac{\text{Number of carriers} \times 10,000}{\text{Task for diggers.}} \\ &= \frac{50 \times 10,000}{2,000} \\ &= 250 \text{ feet.} \end{aligned}$$

The carriers of the first or quarry gang will therefore carry the material to a distance of 250 feet from the quarry and deposit their baskets on trestle platforms at the level of their heads.

3 From thence the baskets are carried on by the members of the next gang to another platform distant 400 feet from the first, where they in their turn deposit the baskets, returning with empty ones, which they find there, to No. 1 platform, where they exchange the empty baskets for full ones and deliver these at No. 2 platform, and so on. Another gang carries the full baskets from No. 2 to No. 3 platform, returning with empties, and the same thing goes on till the road is reached. Each gang working over a distance of 400 feet, except the carriers of the first or quarry gang, who work over a length of 200 feet only.

4. All the workers in the gangs, other than the quarry gang, will necessarily be employed in carrying, and if there are any Class I workers in the gang, these should carry or do a task 50 per cent. in excess of the ordinary of Class II task, children of Class III doing one-half of the Class II task.

The distance or lead being 400 feet, the task for a Class II unit will be $\frac{10000}{400} = 25$ cubic feet, and that for Class I, $37\frac{1}{2}$ cubic feet, and Class III $12\frac{1}{2}$ cubic feet. The strongest gangs should always be placed at the quarry and the weaker ones on the line of communication. An average gang doing a full task in carrying over a distance of 400 feet would consist of and be able to carry—

		Cubic feet.
18	Class I @ $37\frac{1}{2}$ cubic feet =	675
48	" II @ 25 " =	1,200
14	" III @ $12\frac{1}{2}$ " =	175
Total ... 80		2,050

or a little more than the quarry gang can supply them with.

5. The last gang on the line will empty its baskets at the end of the continuous heap of metal or moorum where a few Class I workers will dress it to the proper templet. If the moorum is for repairs to an already surfaced road it will be stacked off the road surface, and metal will, in all cases, be so stacked. In the case of moorum for soling or surfacing a new road bank, the moorum will be stacked in a continuous stack down the centre of the road, to a templet of 9 square feet (see sketch).

6. The task for all gangs including the quarry gang will be set out and measured on the road stack in exactly the same way as described under metal-breaking (Appendix VIII). In the present instance, supposing only one string of gangs to be employed, the task is moving 2,000 cubic feet from the quarry to the roadside and stacking it there. The moorum stack on the road has a capacity of 9 cubic feet to the foot run, and the length of stack that represents the task is therefore $\frac{2000}{9} = 222\frac{2}{3}$ feet. This length is set out by the Work Agent, and if completed all the gangs get full wages.

If it is not done and there is no accumulation of baskets on the line of communication to make up the deficiency, then all the gangs including the quarry gang, should be fined. If an accumulation of baskets (which may be reckoned at $\frac{1}{2}$ cubic foot each) is found on the line, and these with the quantity delivered at the roadside make up the full task, then the gangs from the quarry onwards up to the point where the block occurs have done their work and should not be fined, but only those gangs that are responsible for the block on the line.

7. A sketch of a bullie platform to facilitate the transfer of full baskets from one gang to another is attached.

NOTE.—Also see Central Provinces Circular letter No. 1314-T, dated the 5th February 1900, attached.

Circular letter No. 4-F-1314, dated Nagpur, the 5th February 1900.

From—The Hon'ble L. M. Sr. CLAIR, A. M. I.N.E.T. C. E., Offg. Secretary to the Chief Commissioner, Central Provinces, Public Works Department,

To—All Executive Engineers of Divisions, Central Provinces.

Famine Relief-Works—Carriage of Metal and Moorum from quarries to roadside.

I am directed by the Officiating Chief Commissioner to invite your attention to Appendix XXIV of General Order No. 287-7630-F., dated the 20th September last. This appendix deals with the carriage of metal and moorum from quarries to the roadside by famine relief-workers.

2. Considerable difficulties have been experienced in working out the instructions contained in that appendix, and there is no doubt that the system requires great care and attention on the part of responsible officers, and especially on the part of Famine Works Superintendents and Sub-Divisional Officers. So great have been the difficulties experienced that some officers have proposed to give up the system altogether. Mr. Fraser does not, however, regard these difficulties as insuperable; and he cannot consent to the abandonment of the system.

3. Mr. Fraser values this system as being conducive to order and discipline on the works. This appears to him a consideration of supreme importance. In the course of his inspections, he has found instances in which works have been carefully organized from the first. The Executive Engineer or Sub-Divisional Officer has set himself, despite the stress of other calls on his attention, carefully and determinedly to put everything in order from the first. He has seen personally to the organization of the gangs, and has fixed the tasks after carefully ascertaining by personal inspection what the gangs are able to do as a full day's work. The result has been an orderly camp, where the task imposed has been as effective a test as could be devised. On the other hand, Mr. Fraser has found instances in which there has been carelessness or haste in the initial organization, with precisely opposite results. Tasks have not been properly fixed. Discipline has been absent. Money has been wasted. And people have been attracted to the works who should not be on them. The importance of discipline and careful organization cannot be over-rated.

4. Experience seems clearly to show that, in carrying metal or moorum by relays of workers, the following rules must be observed:—

- (1) The diggers or fillers, as the case may be, must be entirely separated from the carriers, and must form a small gang by themselves at the quarry end of the lead.
- (2) The stackers must also be separated and set to work by themselves at the roadside end of the lead.
- (3) The lengths over which the successive gangs work must be equal throughout from the quarry to the roadside.
- (4) All who are engaged in carrying must be classed as carriers (whether men or women) of Class II or as working children of Class III, as the case may be.
- (5) The number of carriers in each gang must be the same throughout; and similarly the number of work-ing children must also be the same throughout.

- (6) There must be two sets of baskets at the quarry, each set of the same number as the number of the carrying gang; and each gang throughout the lead should also have a double set of baskets.
 - (7) One or more special gangs must be employed in breaking metal or in digging moorum; and carriers or working children must be taken from these to fill the places of absentees in the carrying gangs. The strength of the latter will thus remain unchanged, all absentees being entered against the special gang from which temporary substitutes are taken.
 - (8) Each carrying gang must march in a compact body accompanied by the mate, who shall be responsible for the pace.
 - (9) The set of gangs (up to a maximum ordinarily of about eight gangs) employed in connection with the carrying at one point should be under the charge of one Gang Muharrir, who shall be responsible that no block occurs through the laziness of any particular gang.
5. A few remarks may be made in explanation and elucidation of these rules. Firstly, in regard to rules (1) and (2), the strength of the digger, filler or stackers' gangs must be carefully fixed in reference to the task fixed for the carrying gangs. On one work, for example, Mr. Fraser found ten workers of Class I and ten workers of Class II set apart for "filling and lifting" at the quarry moorum stacks. By standing and watching the work he saw that only 3 or 4 men were adequately employed in filling, and that the carriers themselves lifted their own baskets here as well as at the other stages of the lead. The Sub-Divisional Officer was directed to take up the matter and he found that four "diggers" were enough. Similarly, by careful watching, he reduced a gang of 9 men of Class I and 10 of Class II to 2 men of Class I to do the stacking at the other end of the lead. For the "stacking" was practically only dressing the moorum thrown on the heap by the last gang of carriers.
6. The third, fourth and fifth rules are essential because the number of baskets must be the same throughout. Otherwise a certain number of one gang has to wait until the gang with the smaller number can go back and bring the surplus required. Delays thus take place; and gangs are also broken up to the prejudice of discipline. The sixth rule is also necessary to prevent delays, which when they occur at any point, are of course accentuated throughout the lead. For obvious reasons the seventh rule is required to maintain the equal strength of all gangs from day to day.
7. Rules (8) and (9) are intended to enforce persistent discipline throughout the working hours of the day. The responsibility of Mate and of Gang Muharrirs must be rigorously enforced. A Mate must take in all cases his full share in the fine imposed on the gang, and should also lose the extra piece paid to him under the rules when he has failed to earn it by exacting proper work from the gang. In the same way Gang Muharrirs should be freed when they fail to discharge their responsibility.
8. It may perhaps be well to point out that the limit of "30 able-bodied workers" fixed for gangs under the Intermediate system in paragraph 25 of the General Order, paragraph 5 of Appendix V, and the "Instructions for filling in" prefixed to Appendix XI-a, does not apply to carrying gangs. It is often found expedient to have the gangs of quite double that strength; and this is contemplated in paragraph 2 of Appendix XXIV. It was for gangs of about 80 each (including "working children") that four fillers and two stackers were found sufficient (vide paragraph 5 above).
9. One other point of importance remains for consideration, that is, the fixing of the carriers' task. It seems to be the common opinion that tasks set forth in Appendix XXIV and the other appendices to the General Order are fixed without the possibility of modification. Paragraph 49 of the General Order has been overlooked. There tasks are given as illustrations merely. The responsibility of making the task on any kind of work a full task for the workers employed rests on the Executive Engineer and his responsible subordinates. On one work when it was discovered that the men of Class I who were employed as carriers only carried the same as the workers of Class II, the former were very properly included in the latter class and paid accordingly. This was right, and is what is intended by Rule (4) now issued. But the Sub-Divisional Officer went on to reduce the task prescribed for the gang. This was quite wrong. Experience had shown that the gang could easily perform the old task; and that should have been maintained. Full tasks, as shown by the experience of what carefully watched gangs can perform, must be fixed and exacted.
10. A small matter remains. The Officiating Chief Commissioner feels that the "platform" prescribed by Appendix XXIV is rarely used. On most works the trestles provided are utilized only for swinging the improvised hammocks of the babies. They are not necessary for the carrying work. It is sufficient that the baskets be passed from head to head, or laid down in an orderly manner on the ground to be lifted. In the latter case the people help each other. And there seems a universal objection to the use of the "platform."
11. The Officiating Chief Commissioner trusts that these instructions will lead to the successful application of this system of carrying, which he desires to see adopted in the interests of discipline. He is convinced by careful observation that it is practicable, except where the numbers on the works are exceptionally disturbing owing to altogether abnormal conditions. He trusts also that Executive Engineers and their subordinates will bear in mind the absolute necessity of careful organization and strict discipline from the very first in all classes of work.

Circular No. F-10, dated Nagpur, the 5th April 1902.

From—G. J. PEARSON, Esq., M. Inst. C. E., Secretary to the Chief Commissioner, Central Provinces, Public Works Department,
To—All Executive Engineers of Divisions, Central Provinces.

Carriage of Moorum from quarry to road-side.

To obviate misconception in regard to this Administration's Circular letter No. 4-F-1314, dated the 5th February last, I am directed to say that the Officiating Chief Commissioner is prepared to sanction the method of direct carrying from the quarry to the roadside, where it is found inconvenient to introduce the method of carrying by relays, vide paragraph 11 of that Circular letter.

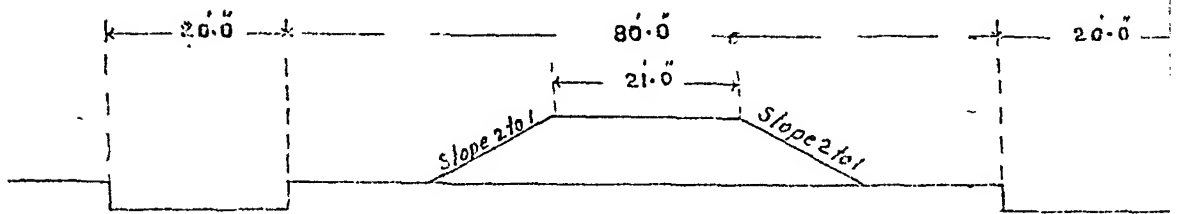
2. Where the former system is introduced, it is necessary to arrange for the maintenance of strict discipline. It was the main object of the orders contained in that Circular letter to maintain discipline; and it is essential that this should not be lost sight of.

3. It must be borne in mind that where men and women work together as carriers, both must belong to Class II [paragraph 4 (4) of the Circular letter referred to].

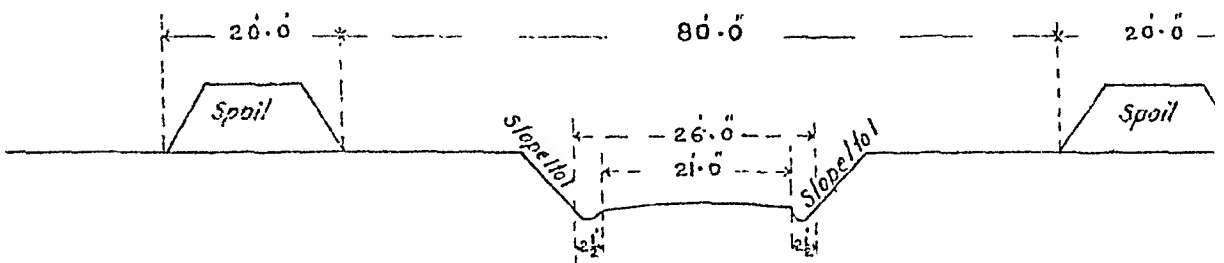
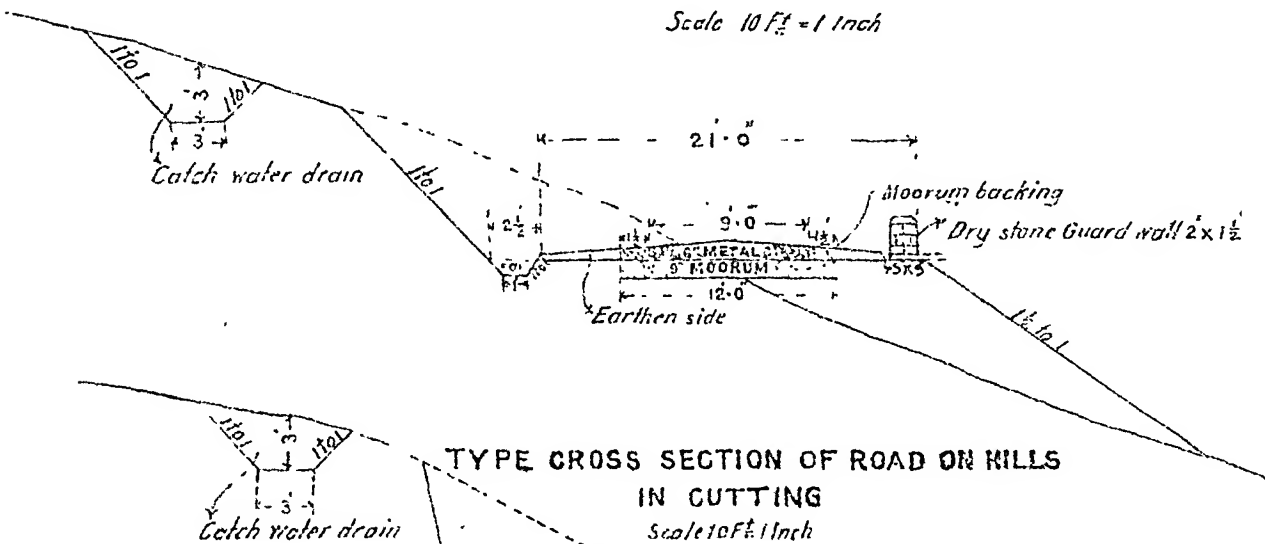
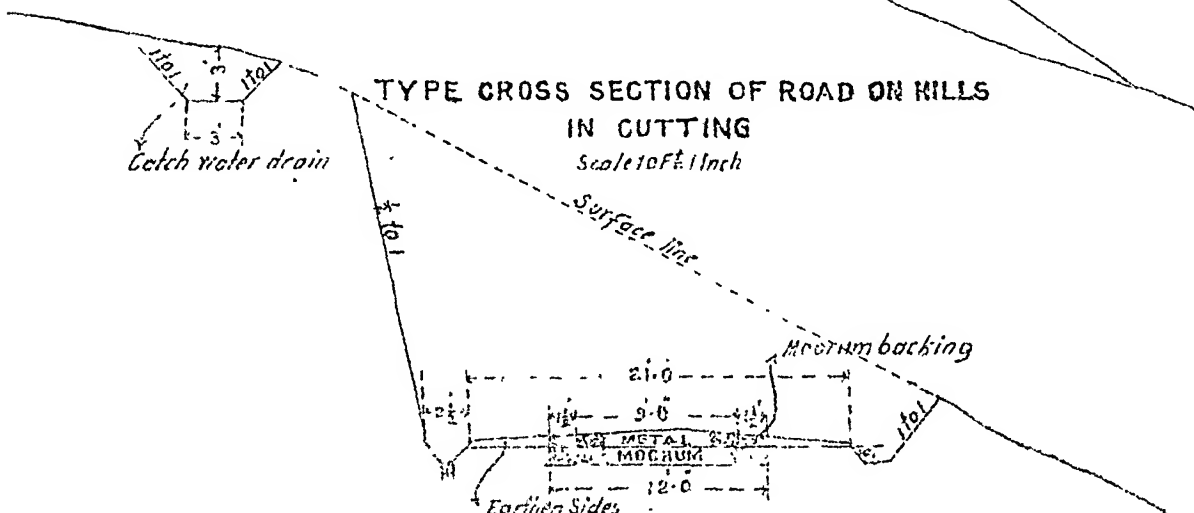
4. The direct system of carrying must not in any case be adopted for unduly long leads, say, of over a mile; for the continued strain is too great. And, even when men work alone, it is better to give them a reasonable burden to carry (as members of Class II) than to pay them more for carrying too heavy a burden. Only really strong men should be included in Class I, and then only when working in a separate gang.

5. Discretion as to the system to be adopted is thus left with you. What is required is that you should exercise that discretion after giving full consideration to all the facts and circumstances of the case, and especially to the necessity for enforcing strict discipline.

TYPE CROSS SECTION OF ROAD IN EMBANKMENT

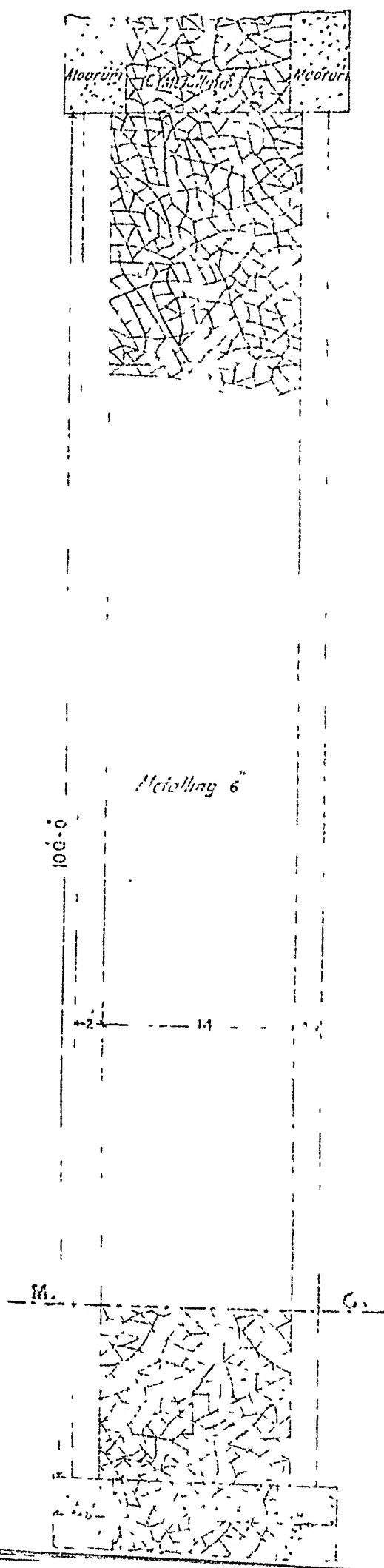
Scale $20 \frac{\text{Ft}}{\text{In}} = 1 \text{ Inch}$ 

TYPE CROSS SECTION OF ROAD IN CUTTING

Scale $20 \frac{\text{Ft}}{\text{In}} = 1 \text{ Inch}$ TYPE CROSS SECTION OF ROAD ON HILLS
IN $\frac{1}{2}$ CUTTING AND $\frac{1}{2}$ BANKScale $10 \frac{\text{Ft}}{\text{In}} = 1 \text{ Inch}$ TYPE CROSS SECTION OF ROAD ON HILLS
IN CUTTINGScale $10 \frac{\text{Ft}}{\text{In}} = 1 \text{ Inch}$ 

TYPE DRAWING FOR METALLED CAUSEWAY.

Scale 10 Ft = 1 Inch

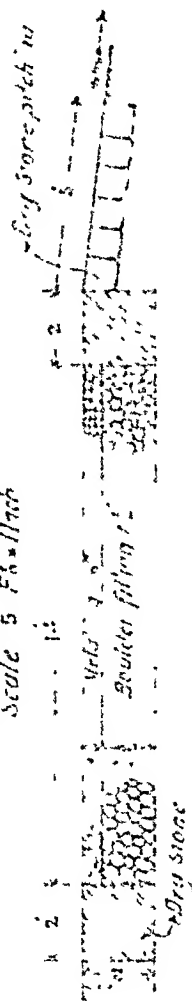


Note

Top of causeway should be flush with
and never higher than the bed of the river

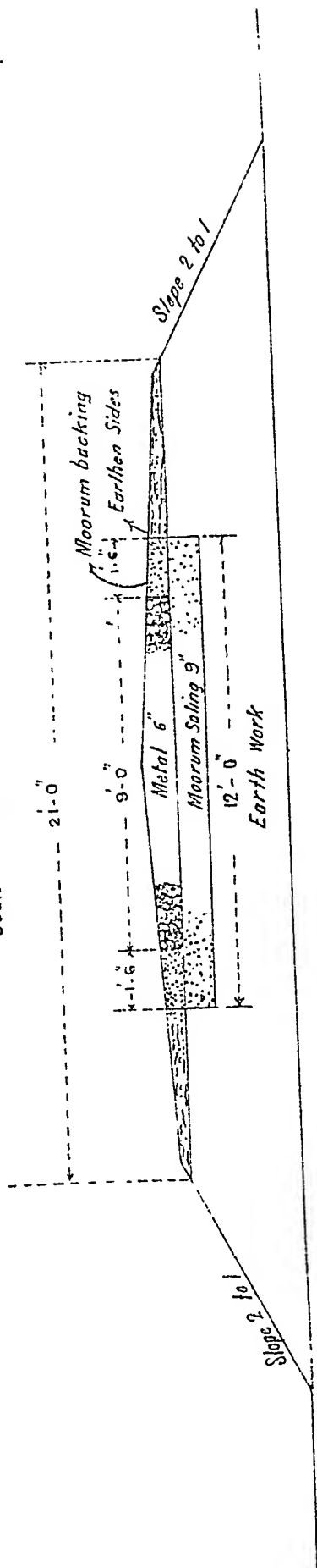
SECTION ON M. C.

Scale 5 Ft = 1 Inch



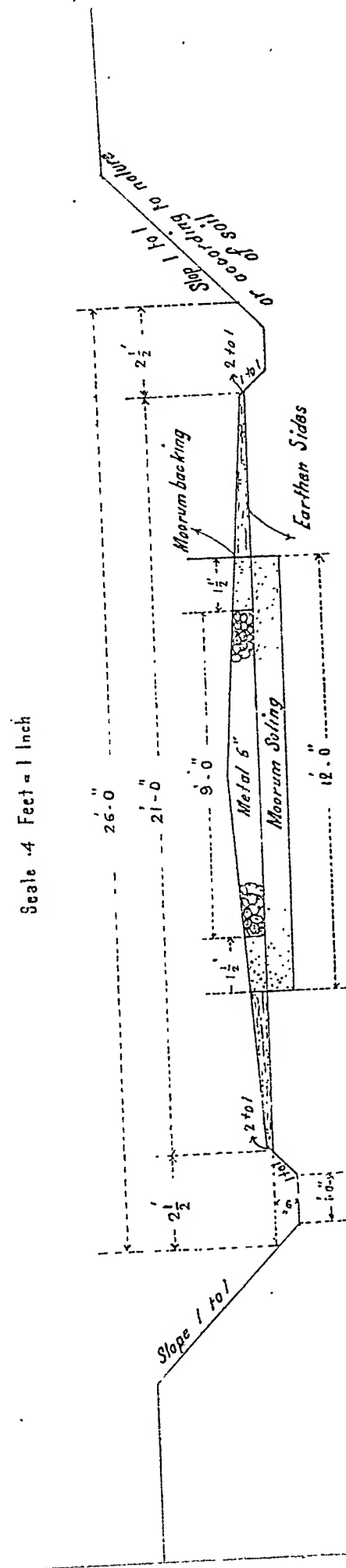
DETAILED TYPE CROSS SECTION OF ROAD IN EMBANKMENT

Scale 4 Feet = 1 Inch.



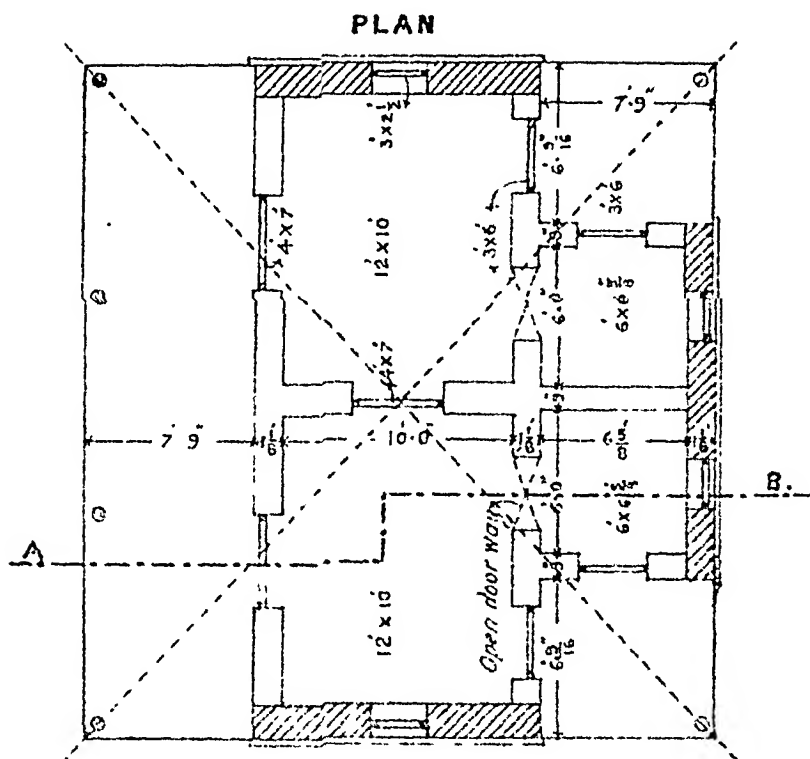
DETAILED TYPE CROSS SECTION OF ROAD IN CUTTING

Scale 4 Feet = 1 Inch



**TYPE DRAWING
OF A
TEMPORARY INSPECTION HUT**

Scale 8 Ft.=1 Inch



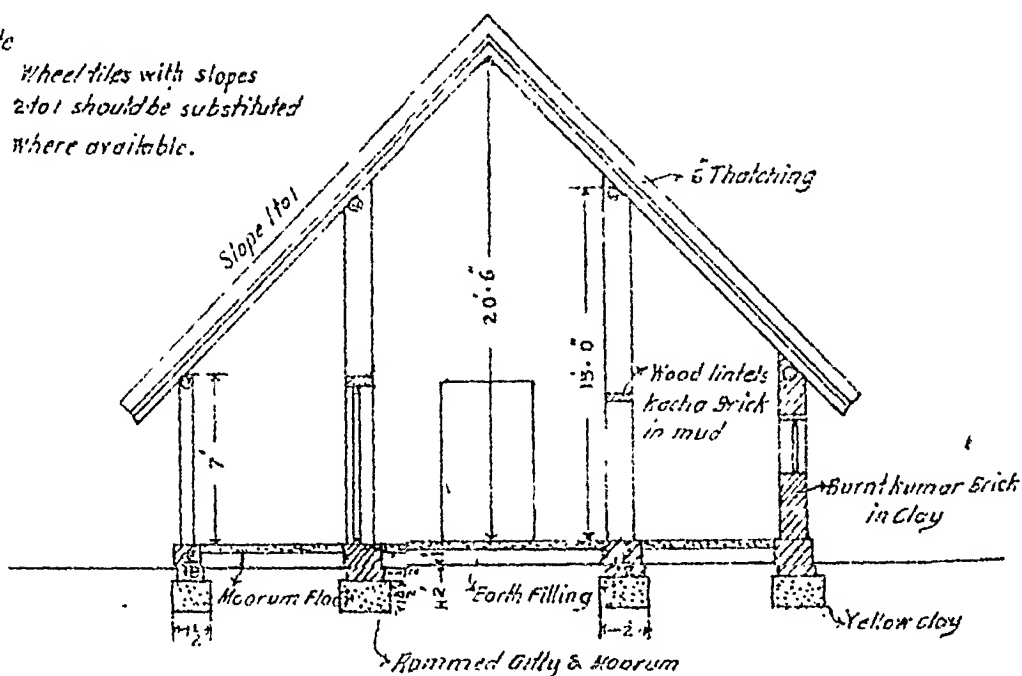
Note

Plinth area 760 S. Ft. Estimated Cost of the Building with 2 ft. foundation is Rs. 363/- or $\frac{363}{760} =$ Rs. 0-7-8 S. Ft.

SECTION ON A.B.

Note

Wheel tiles with slopes 2:1 should be substituted where available.



N. E.

The Cost with single wheel tiles should be Rs. 397/- or plinth area = 760 S. Ft. = $\frac{397}{760} =$ Rs. 0-8-10 S. Ft.

Note

(1) Sites should if possible be so selected as to admit of the inspection huts being of some use even after the famine operations are over.

(2) Where Brick Masonry is not procurable wattle and

APPENDIX XXVI.

No. F-26—4492, dated Nagpur, the 6th October 1899.

From—M. W. FOX-STANGWAYS, Esq., I. C. S., Chief Secretary to the Chief Commissioner, Central Provinces,
To—All Commissioners and Deputy Commissioners and the Political Agent, Chhattisgarh Feudatory States, Central Provinces.

The following orders are issued for the guidance of officers in connection with the Inspections of Famine Relief Works:—

Order Books on Works.

2. An Order Book (not an Inspection Book) is to be kept up for each separate charge at site of works, for the use of officers empowered to give orders to the Officer-in-charge, *i. e.*—

The Executive Engineer.

The Sub-Divisional Officer.

The Famine Works Superintendent.

The Deputy Commissioner.

The Civil Surgeon or Medical Officer on special famine duty (in regard to sanitary matters only).

3. The Deputy Commissioner's Assistants are not authorized to give orders to the Officer-in-charge direct, but they should look at the Order Book and see that orders recorded have been attended to by the Officer-in-charge, reporting to the Deputy Commissioner, for the information of the Executive Engineer, cases in which they have not been complied with.

Inspection Reports.

4. It is not considered necessary that Sub-Divisional Officers, Famine Works Superintendents or Executive Engineers should write Inspection Reports. As Departmental Officers responsible for the proper carrying out of the work, their business is to have put right anything they consider needs it, and to remedy deficiencies rather than report them.

5. Inspection Reports should be mainly confined to the Deputy Commissioners, their Assistants, and the District Staff, or to Medical Officers, so far as sanitary arrangements, water-supply, hospital, &c., are concerned. The reports of these officers should be recorded in the attached form, and sent first to the Deputy Commissioner, who will pass them on with his recommendations or orders to Executive Engineers, on whom the responsibility will rest of taking necessary action. In cases where immediate action is necessary Deputy Commissioners will of course issue orders direct, informing the Executive Engineer. The reports should be ultimately filed in the Sub-Divisional Office.

6. It is not considered necessary that these Inspection Reports should go beyond the Deputy Commissioner and the Executive Engineer, who is the responsible officer. The Commissioner or the Superintending Engineer can call for them if they wish in any special case.

Control.

7. It will be understood that the management of a large relief-work by the Public Works Department is subject to a power of control by the Commissioner and Deputy Commissioner of all points affecting the efficiency of relief. The latter is the agent of Government for carrying out all measures of relief, and he will exercise general supervision over all relief-works within his district, and will be responsible to Government for their efficiency. His decision must be accepted (pending reference to superior authority, if necessary) in all matters relating to the employment and wages of the labourers, the opening or closing of works, the arrangements for a distribution of gratuitous relief, and generally, in all other matters which are not of a professional nature. Officers of all Departments employed on famine duty within the district should obey his orders. Should these orders be questioned as contravening departmental orders, a reference should be made to the Commissioner, whose orders should be carried out at once, and will be final, subject to a reference to the Chief Commissioner if thought necessary. The Deputy Commissioner will of course interfere as little as possible, and will exercise his control through the Executive Engineer, unless the case is such as to call for immediate action.

FAMINE RELIEF WORKS.

Inspection Note by

Charge No.

Date

{ Road
{ Tank

District

Division

Officer-in-Charge

General Remarks

Points of inspection	Remarks by Inspecting Officer.	Remarks by Deputy Commissioner.	Orders issued to Sub-Divisional Officer by Executive Engineer or Superintendent of Works.
I.—(a) Hospital arrangements and sufficiency or otherwise of stock of drugs and hospital necessities. (b) Whether a properly qualified Hospital Assistant is attached.			
II.—Hospital arrangements for contagious diseases.			
III.—Latrine and conservancy arrangements, fixing of boundary flags, &c.			
IV.—General condition and health of the coolies.			
V.—Arrangements for sending sick people found on the work to the hospitals, and their disposal and care on first arrival there.			
VI.—Water arrangements for drinking purposes.			
VII.—Kitchen arrangements.			
VIII.—Arrangements for receiving coolies when first arriving.			
IX.—Hutting arrangements, and shelter against rain.			

Points of Inspection.	Remarks by Inspecting Officer.	Remarks by Deputy Commissioner.	Orders issued to Sub-Divisional Officer by Executive Engineer or Superintendent of Works.
X.—Classification if properly carried out.			
XI.—Method of mustering.			
XII.—Method of paying wages.			
XIII.—Result of scrutiny and check of gang registers by actual mustering of one or more gangs.			
XIV.—Complaints by work-people.			
XV.—System in force— (a) Intermediate. (b) Task-work.			
XVI.—Task exacted from workers.			
XVII.—Manner in which work is being executed.			
XVIII.—Arrangements for safe custody of cash.			
XIX.—Orders regarding lighting of fires and their prohibition near grass shelter huts, especially the hospital.			

Points of Inspection.	Remarks by Inspecting Officer.	Remarks by Deputy Commissioner.	Orders issued to Sub-Divisional Officer by Executive Engineer or Superintendent of Works.
XX.—Checking of the entries in the Cash-book by comparing them with the Gang Muharrir's Day-book (Field Accounts Form No. II) from which the supporting voucher (Field Accounts Form No. III) is compiled; also by comparing the vouchers for purchases of supplies for the kitchen, and the stock return (Kitchen Accounts Form No. II) with the Cash-book entries. These are the most important points connected with the accounts of a charge, and should be carefully looked into by an Inspecting Officer.			
XXI.—Checking of equipment, staff, &c.			
XXII.—Market prices; sufficiency and quantity of grain supplied.			
XXIII.—Police—Reporting of vital statistics.			
XXIV.—General			

Forwarded to the Deputy Commissioner, ——— District. Forwarded to the Executive Engineer, ——— Division.

Signature of Inspecting Officer.

Deputy Commissioner, ——— District.

Date _____ 190.

Date _____ 190.

APPENDIX XXVII.

No. F—15-S. (F—29-S.), dated Nagpur, the 30th May 1900.

From—G. J. PERRAM, Esq., M. INST. C. E., Superintending Engineer, Central Provinces,

To—All Executive Engineers of Divisions, Central Provinces.

Famine Relief Works—Estimates.

General Order No. 287—7630-F., dated the 20th September 1899, Section VIII, paragraph 84, lays down that the expenditure on famine relief is to be recorded under the following six heads only, *viz.* :—

- (i) Wages.
- (ii) Gratuitous Relief.
- (iii) Special Work Establishment.
- (iv) Other Items.
- (v) Tools and Plant.
- (vi) Items of work executed by contract, such as mile-stones, collection of rubble (when executed by contract) and other similar work.

Paragraph 71 of the General Order describes in general terms what items each of the four heads (i) to (iv) should include. Head (v) "Tools and Plant" needs no explanation. As regards (vi) "Items of work executed by contract," it must be distinctly understood that only *payments to contractors* for work done come under this head. For example, if rubble for metal-breaking is both quarried and carted to road-side by contractors, the whole expenditure falls under (vi); if the collection of rubble is likewise completely carried out by famine labour, the expenditure would come under (i) and (ii); if, on the other hand, the rubble is quarried by famine labour, but carted by contract, the expenditure on quarrying would fall under (i) and (ii), and that on carting under (vi).

2. With reference to the estimates to be submitted, I have the honour to request your attention to the following instructions :—

- (a) An estimate for each "Work," be this construction or metal collection, is to be submitted. The estimate to be prepared at normal rates. Against this estimate will be debited the expenditure on that particular work on (i) *Wages*, (ii) *Gratuitous Relief*, and (vi) *Items of work executed by contract*, such as mile-stones, collection of rubble for metal-breaking (when executed by contract) and other similar work. For example, against "Earth-work" would be debited the expenditure on (i) *Wages* and (ii) *Gratuitous Relief* in connection with that particular work; likewise, against "Metal collection" would be charged the expenditure on (i) *Wages*, (ii) *Gratuitous Relief* and also (vi) *Collection of rubble by contract*, if any.
- (b) Estimates for *Special Work Establishment* should be made out by districts and submitted from time to time. These estimates should include all special establishment, whether on the works or in offices specially created for Famine Works, *exclusive of such as is paid on Gang Registers and of additions to the Clerical and Accounts Establishment of an existing office*, the cost of such additions being chargeable to the ordinary head, *vide* Public Works Department Code, Volume I, Chapter IX, paragraph 104, note to sub-clause II of clause VI. The *Special Works Establishment* estimates should also include—
 - (i) Salary and deputation allowance (if any) of men transferred from the Civil Department.
 - (ii) Deputation allowance of Military Officers and subordinates transferred from the Military Department and other extra charges incurred in that Department in consequence of their absence.
 - (iii) Travelling allowance.
 - (iv) Contingencies.
- (c) Estimates for (iv) *Other Items*, should be submitted by districts from time to time. These estimates should include all anticipated expenditure on Hutting, Conservancy, Water-supply, Hospitals, Buildings, such as on grass, timber, mats, nands, water-carts, kerosine tins, hospital drugs, instruments, stores, bedding, &c., firewood and fees for burning or burying of corpses; and articles, which though strictly speaking are *Tools and Plant* are of a perishable nature and cannot be brought on to stock on the termination of Relief operations, *e.g.*, baskets, earthenware gharas, twine, &c. They should not include any establishment in connection with the above, which would come under either (a) *Wages*, or (b) *Special Establishment* above.
- (d) Estimates for the actual expenditure incurred or to be incurred on (v) *Tools and Plant* should be submitted by Divisions, supplementary or revised estimates being sent in from time to time as may be required to cover further expenditure. These estimates should include besides tools, such as picks, phaoas, hammers, crowbars, water-tanks, &c., such articles as kitchen utensils, cash-chests and boxes and camp furniture, and all articles of a non-perishable nature which can be brought on to stock when relief operations are closed.

3. The above should make it quite clear under what estimate any particular charge should be included: there may however occasionally arise a mixed case, such as the following. The cost of a galvanized iron water cylinder with brass tap attached, and its freight from Bombay to the nearest railway station, would come under *Tools and Plant*, but the cost of carrying the cylinder from the railway station to the relief work and mounting it on a cart for use there would be charged to *Other Items*.

4. This cancels this Office Circular No. 290—7673-F., dated the 20th September 1899.

APPENDIX D TO THE FAMINE REPORT, PUBLIC
WORKS DEPARTMENT SECTION.

Abstract statement of work done and expenditure incurred in the
Civil Department, Central Provinces.

DIX D.

incurred in the Civil Department, Central Provinces.

for which actual reliable measurements of work done exist]

EXPENDITURE.		Total number of day units relieved.	Number of day- units relieved per rupee	Ratio of famine to ordinary rates of work.	Remarks
Items of work done by contract.	Total				
8	9	10	11	12	13
Rs.	Rs.	No.	No.	Ratio.	
...	1 72,000	2 265,289	13	0 98	
...	6 918	96,628	14	0 64	
...	
...	5,305	69,321	12	0 86	
...	35 588	501 052	14	1 39	
...	4 776	43 542	9	0 99	
123	14 937	1 37,563	9	0 87	
3 445	2,45 160	2 600,285	11	1 23	
10	1,07 845	1,605,115	15	0 50	
...	19 261	190,646	10	0 63	
...	1 04 641	1 328 335	13	1 12	
...	86 024	837,628	10	1 46	
...	21,500	250,276	12	2 06	
...	7,711	96,145	12	1 10	
...	
...	28,41 323	46 321,184	16	0 44	
...	8 70,541	12,270,566	14	0 42	
...	1,22 076	1,253 668	10	1 07	
3 588	45,65 525	69,877,618	15	0 49	

APPENDIX E TO THE FAMINE REPORT,
PUBLIC WORKS DEPARTMENT SECTION.

Abstract statement of work done and expenditure incurred in the
Civil Department, Central Provinces.

APPENDIX

Abstract statement of work done and

[N. B.—This statement includes all works

[N. D.—This statement includes all works

NEW TANKS CONSTRUCTED.

OLD TANKS RESTORED OR IMPROVED.

Serial No.	District.	NEW TANKS CONSTRUCTED.								OLD TANKS RESTORED OR IMPROVED.													
		Total number of works done.	Average number of works going on at one time.	TOTAL EXPENDITURE, IN THOUSANDS OF RUPEES.				Total number of day-units relieved.	Number of day-units relieved per rupee.	Total number of works done.	Average number of works going on at one time.	TOTAL EXPENDITURE, IN THOUSANDS OF RUPEES.				Total number of day-units relieved.	Number of day-units relieved per rupee.						
				Wages.	Special establishment and contingencies.	Items of work done by contract.	Total.					Wages.	Special establishment and contingencies.	Items of work done by contract.	Total.								
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18						
		No.	No.	Rs.	Rs.	Rs.	Rs.	No. in thousands.	No.	No.	No.	Rs.	Rs.	Rs.	Rs.	No. in thousands.	No.						
1	Jubbulpore	13	3	41	8	..	49	683	14	54	11	73	16	..	89	1,130							
2	Seoni	5	..	3	1	..	4	45	11	8	..	3	1	..	4	63	1						
3	Mandla	..	..	..	..	..	..	..	..	..	31	7	..	..	7	104	1
4	Saugor	..	1	2	1	..	3	31	10	..	7	15	2	7	24	310	1						
5	Damoh	..	..	..	..	..	..	No details given	..	..	..	..	..	..	..	..	..
6	Nagpur	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
7	Wardha	13	3	4	..	..	4	17	4	12	12	23	1	..	23	263					
8	Chanda	54	24	64	3	1	63	814	12	12	12	23	1	..	21	172							
9	Bhandara	..	..	..	..	..	..	..	..	166	63	106	1	..	107	1,250	
10	Balaghat	4	3	3	..	..	3	34	11	233	84	94	1	..	95	1,235					
11	Hoshangabad	19	17	27	3	..	30	357	12	37	28	54	8	..	103	1,302							
12	Betul	18	..	13	..	..	13	129	10	12	..	42	4	..	46	445	1				
13	Nimar	..	1	9	2	..	11	138	13	..	2	3	1	..	4	54	1						
14	Narsinghpur	1	1	1	..	..	1	6	6	2	2	2	..	..	2	17	5		
15	Chhindwara	20	19	13	1	..	14	157	11	27	25	11	1	..	12	122	10						
16	Raipur	341	65	..	..	..	..	..	1,051	201	..	..	..	..	..	..	..
17	Bilaspur	236	134	350	1	..	351	4,718	13	411	220	552	2	..	554	7,974	14						
18	Sambalpur	..	31	174	9	..	123	1,240	10	..	..	..	..	..	..	..	..
TOTALS AND AVERAGES FOR CENTRAL PROVINCES.		714	302	644	29	1	674	8,350	12	2,258	804	1,150	41	7	1,108	16,093							

DIX E.

expenditure incurred in the Civil Department, Central Provinces.

whether measurements for them exist or not.]

ROAD WORKS.								OTHER WORKS.								TOTAL.							
Total number of works done.		Average number of works going on at one time.		TOTAL EXPENDITURE, IN THOUSANDS OF RUPEES.				Total number of day-units relieved.		Number of day-units relieved per rupee.		Total number of works done.		Average number of work going on at one time.		TOTAL EXPENDITURE, IN THOUSANDS OF RUPEES.				Total number of day-units relieved.		Number of day-units relieved per rupee.	
19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40		
No.	No.	Rs.	Rs.	Rs.	Rs.	No. in thousands.	No.	No.	No.	Rs.	Rs.	Rs.	Rs.	No. in thousands.	No.	Rs.	Rs.	Rs.	Rs.	No. in thousands.	No.		
6	1	11	2	...	13	178	14	46	10	18	3	...	21	274	13	143	29	...	172	2,265	13		
...	...	...	...	...	...	...	...	4	...	0'3	...	...	0'3	4	13	6'3	2	...	8'3	111	13
...	110	55	...	...	55	726	13	...	38	7	...	...	7	79	11	69	...	...	69	509	13
...	2	5	1	...	6	42	7	...	2	3	...	...	3	40	13	25	4	7	36	432	12
...	...	...	...	...	...	...	...	No details given				...	...	...	...	...	...	...	36	...	...
...	...	...	...	...	...	...	...	7	7	3	...	...	3	13	4	25	1	...	26	276	11
...	...	...	...	...	...	...	...	76	27	1	...	...	1	2	2	25	1	...	26	191	7
7	3	148	37	3	188	2,257	12	10	6	2	...	...	2	31	15	330	41	4	365	4,391	12
3	3	0'2	...	...	0'2	5	25	394	134	20	2	...	22	297	13	126'2	4	...	130'2	1,907	15
1	1	0'2	...	...	0'2	3	15	236	69	7	...	...	7	104	15	104'2	1	...	105'2	1,376	13
35	25	114	5	...	119	1,340	11	189	133	67	8	1	76	950	12	302	24	1	327	3,949	12		
13	...	22	2	...	24	231	10	242	...	4	...	...	4	41	10	81	6	...	87	846	10
...	1	0'2	...	...	0'2	2	10	...	8	14	2	...	16	154	10	26'2	5	...	31'2	348	11
...	...	...	...	...	...	...	...	8	4	5	...	...	5	76	15	8	...	...	8	99	12
...	...	...	...	...	...	...	...	3	3	1	...	...	1	7	7	25	2	...	27	286	11
11	2	...	...	...	...	...	...	216	42	...	...	...	...	...	...	2,786	55	...	2,841	46,321	16
1	1	0'5	...	...	0'5	0'2	4	16	9	3	...	...	3	46	15	905'05	3	...	908'05	12,738	14
...	5	46	3	...	49	524	11	...	...	...	...	...	...	...	...	160	12	...	172	1,764	10
77	154	401'65	50	3	454'65	5,308	12	1,447	492	155'3	15	1	171'3	2,118	12	5,136'95	190	12	5,374'95	78,209	15		

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